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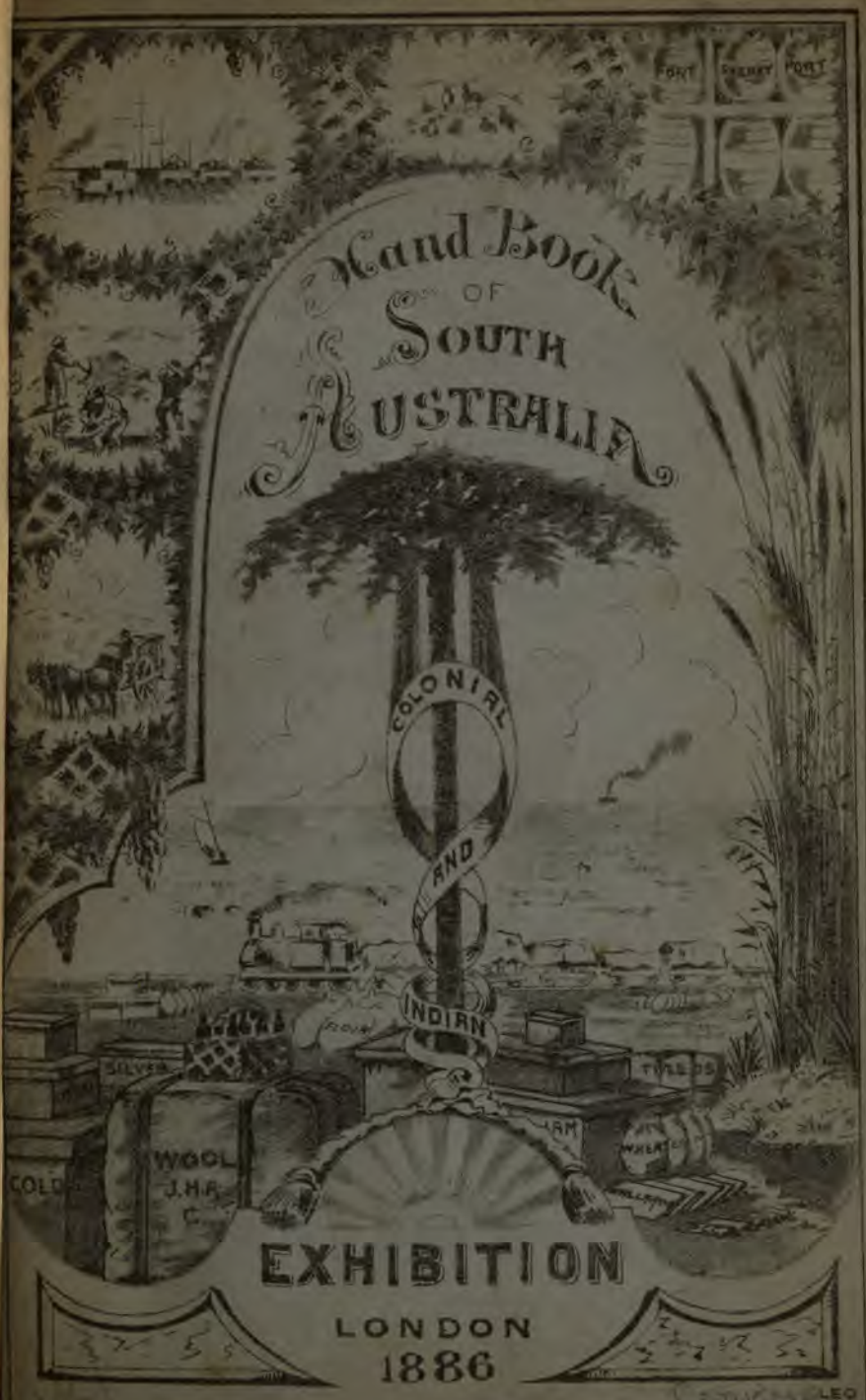


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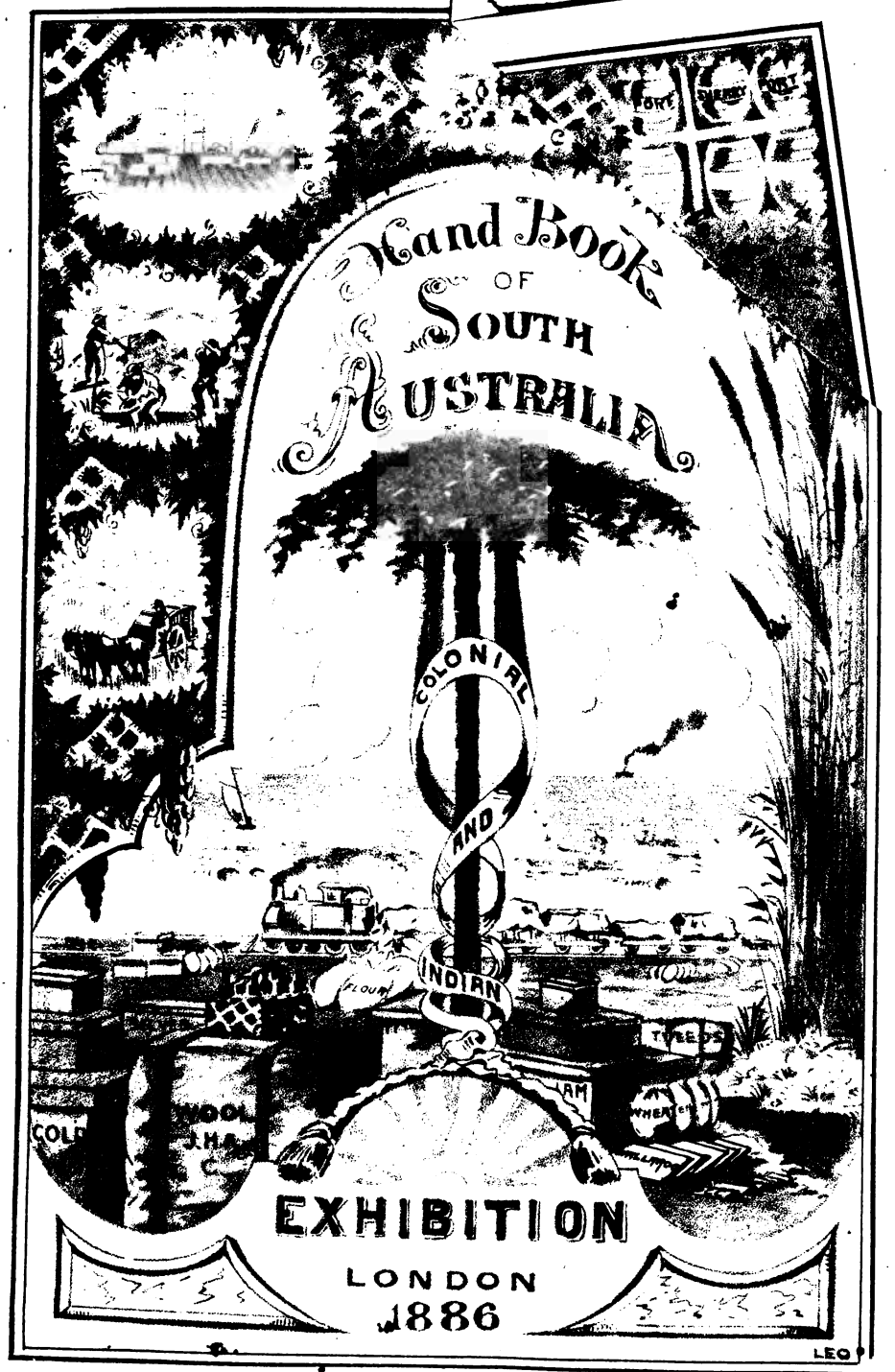


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# SOUTH AUSTRALIA:

A

# SKETCH OF ITS HISTORY & RESOURCES.

## A HANDBOOK:

COMPILED BY

JOHN FAIRFAX CONIGRAVE

FOR THE

## COLONIAL AND INDIAN EXHIBITION,

LONDON, 1886.

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# PREFACE.

THIS Handbook has been prepared by instructions from the South Australian Commissioners for the use of visitors to the Colonial and London Exhibition in London during the present year. When honored with the task of preparing a Handbook, I was instructed to compile such a work as would enable a person who contemplated emigrating to South Australia to obtain, as he rode home from the Exhibition, some general idea of the country to which he wished to go. Necessarily, therefore, the information supplied is given in general terms. I have assumed the possession of some prior knowledge of South Australia on the part of those into whose hands this book may come, and have endeavored mainly to give information on those matters which would be sought for by intending emigrants. In the hope that this Handbook may prove of interest to all who read it, and may be specially helpful to those who contemplate settlement in one of the Australian Colonies, it is now submitted to the public.

An International Exhibition is to be held in Adelaide in June, 1887, to celebrate the jubilee of the foundation of the Colony as a British Province, and to commemorate, also, the completion of the fiftieth year of the reign of Her Gracious Majesty Queen Victoria. This record of what the Colony has achieved will, it is hoped, be of service to manufacturers in Europe, America, and elsewhere, who may see in the Exhibition a favorable opportunity of placing their goods before the Australasian public, and, in the expanding trade of the Australasian Colonies, an inducement to open up these promising channels of commerce.

JNO. FAIRFAX CONIGRAVE.

Finniss-street,
North Adelaide.

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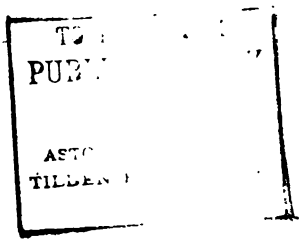
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# SOUTH AUSTRALIA:

## SKETCH OF ITS HISTORY AND RESOURCES.

# SOUTH AUSTRALIA:

A

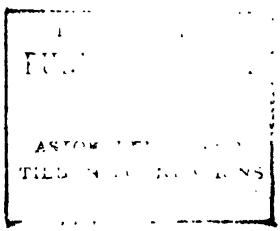
# SKETCH OF ITS HISTORY & RESOURCES.

## *Chapter I.—INTRODUCTORY.*

THE aim of this handbook is to give to the British public, in a concise manner, some information respecting one of England's great antipodean Colonies. The importance of the Australian settlements is apparent to anyone who has visited them, or who from a distance has had occasion to make himself acquainted with their advancement in national wealth, or to contemplate their immense natural resources—which at present are only in the infancy of development. The vast proportion of the British public, however, know little of Australia—the "Greater Britain" of the southern seas—and it is hoped that the following pages will be helpful in disseminating practical information that will be of service to all who are interested in the triumphs of British colonisation; but particularly those who may contemplate a removal from the crowded populations of the United Kingdom to the attractive fields presented by Britain's Colonies. It will not be the privilege of the writer to draw upon a rich historic past for the story he has to tell. There may be open to him no daring military achievements to invest his story with the glory of national renown; there may be no venerable institutions or relics, with inspirations of reverence and wonder; and there

may be no magnificent literature to command the attention or awaken the interest of the student and the scholar. Scarcely fifty years have passed since South Australia was proclaimed a British Colony, and yet the record of this half century is full of interest to all who care to see the advancement of the Anglo-Saxon stock. The bold enterprise, the indomitable pluck, the dogged perseverance, and the love of freedom, which form such striking characteristics of the English race, have been called into full operation in the peaceful subjugation of the primeval wastes to the service of man, and their rapid transformation into a hive of human industry. Few pages in the history of British colonisation are fuller of interest than those which record the establishment and growth of these countries in the Southern Hemisphere, that are vaguely known in Europe under the generic name of "Australia." The story of how a handful of Britons have, within the cycle of a century, founded countries that are rivalling Old World nations in wealth and power, and the elegancies of advanced civilisation, is instructive and inspiriting. It speaks of the vigor and genius of the old stock reasserting itself in the younger strength and ardent effort of the offshoots; and it shows how the same characteristics of courage, sagacity, perseverance, industry, and prudence, which have made England what she is, are operating in the development of these daughter-nations under the Southern Cross. In the following pages special attention will be drawn to one of the seven Colonies that form the Australian possessions of Great Britain—the Province of SOUTH AUSTRALIA.

Government House in 1837.



## *Chapter II.—HISTORY.*

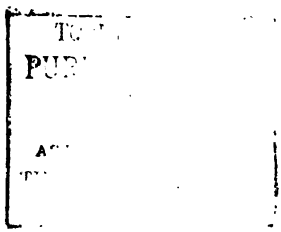
In the year 1831, Captain Sturt—one of the earliest Australian explorers—discovered the great River Murray, which runs down into South Australia, and empties itself into the Southern Ocean; and, on his return to Sydney, gave such a glowing report of the fertile country which he had seen at a distance, but was unable to explore, that an adventurous band of pioneers took ship from Sydney, and landed on the shores of St. Vincent's Gulf. These are supposed to have been the first white men who scaled Mount Lofty—a high elevation which overlooks the wide-stretching plain upon which the city of Adelaide now stands. In the early part of that same year, a few gentlemen met in London to discuss the propriety of founding, on the southern shores of Australia, a colony upon principles which at that time were advanced principles of Political Economy. The promoters opened up negotiations with the Imperial Government, but were not successful, and the project fell through. It was not, however, allowed to slumber very long. In 1834 the project was renewed, and in June of that year a meeting of gentlemen was held at Exeter Hall, London, to discuss the principles upon which the proposed settlement should be founded. Just at that time, a scheme of colonisation, propounded by Mr. Edward Gibbon Wakefield, was attracting attention. That gentlemen, thoughtfully observing the course of events in the other Australian colonies, had come to the conclusion that land without the operation of capital and labor was useless. He sought to give a fixed price to land; to provide that land should only be sold, and not be disposed of by free grants; and to apply the proceeds of waste lands to the cost of importing labor from the crowded cities and towns of the United Kingdom. These principles commended themselves to the promoters, who, in 1834, secured the passing of an Act by the Imperial Legislature, authorising the Sovereign to erect one or more provinces in that part of Australia lying between the 132nd and 141st meridians of east longitude, and between the Southern Ocean and the 26th

degree of south latitude. The persons residing within the said province or provinces were accorded freedom of action—they were not to be subject to the law or constitution of any other part of Australia; and furthermore it was provided—and the sagacity of the originators in this respect is worthy of mention—that no criminals should at any time or under any circumstances be transported to any place within the limits described. The curse of convictism, therefore, has never attached itself to the Province of South Australia.

The first Commissioners appointed under the Act were eight in number, viz. :—Colonel Torrens, F.R.S. (chairman), and Messrs. W. A. Mackinnon, M.P., Jacob Montefiore, W. Hutt, M.P., Geo. Palmer, jun., John Wright, Geo. Fife Angas, and Samuel Mills. Only one of these Commissioners survives, and it is an interesting circumstance that this survivor—Mr. Jacob Montefiore—is one of the Honorary Commissioners for South Australia at the Colonial and Indian Exhibition in London in 1886. To him—in his advanced age—it must be a source of deep gratification that he has been spared to see a colony, in the inception of which he took so deep and personal an interest, qualified to honorably take her position among the daughter-nations of Britain in the interesting and important Exhibition before referred to.

The project of colonisation, however, almost proved abortive. The Imperial Act provided that a sum of £35,000 must be raised before the powers given under the Act could be exercised, and the scheme hung fire. Just then, however, the late Mr. George Fife Angas, who was one of the Commissioners, came to the rescue. He formed an association known as "The South Australian Company," and, resigning his commissionership, he assumed the chairmanship of the company. This company subscribed the balance of capital required, and the scheme of colonisation proceeded. The late Sir James Hurtle Fisher was appointed Resident Commissioner in the Colony, and the late Colonel Light was sent out, as first Surveyor-General, to choose a site for the capital, and push on the survey of the land for the settlers. In August, 1836, Colonel Light arrived at Kangaroo Island, and thence he proceeded to the mainland east of St. Vincent's Gulf, where he commenced his work, and selected the present site of the capital—Adelaide.

**Government House, 1886.**



In the following December, the first Governor of South Australia —Captain Hindmarsh, R.N.—arrived, and took possession of the land in the name of the Sovereign of England, on the 28th December, 1836, the anniversary of which day is always closely kept as a public holiday.

Since the proclamation of the Province, South Australia has witnessed many changes in fortune, but through all her vicissitudes she has made substantial advancement. Some of the other Colonies have attained wealth and importance by the discovery of rich goldfields, the development of which has enormously increased their natural resources, besides attracting—as few other discoveries have the power of doing—a large and able-bodied male population from a distance. These resources of wealth and population, springing from adventitious circumstances, have made the progress of some of the other Australian provinces quite phenomenal in its character. The advancement of South Australia, on the other hand, has been achieved by patience, endurance, industry, and enterprise. Although rich goldfields have not been discovered, gold is found in many parts of the Colony, and a number of productive copper mines have poured out great mineral wealth. Indeed, on more than one occasion, South Australia has been saved from impending disaster and collapse by the rich yields of copper from the far-farmed Kapunda, Burra Burra, Moonta, Wallaroo, and other mines.

## *Chapter III.—SITUATION AND EXTENT.*

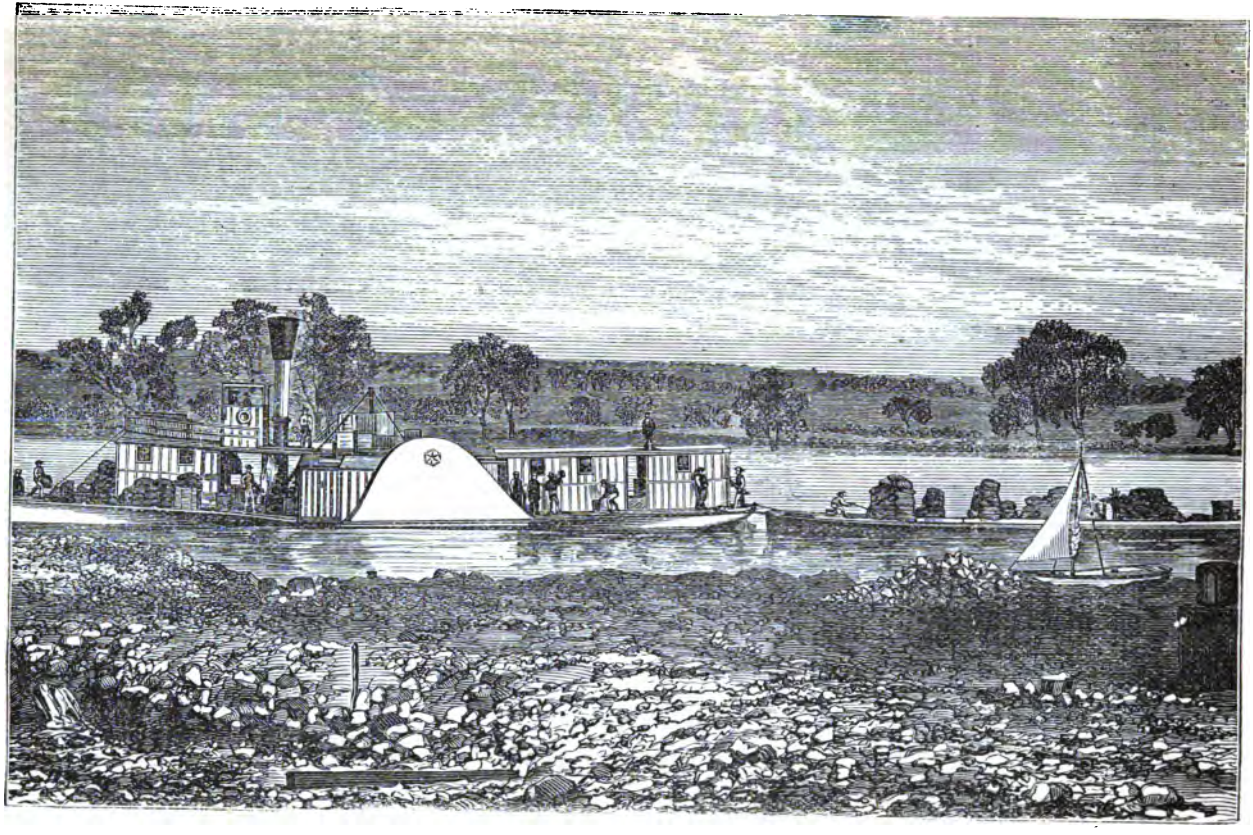
SOUTH AUSTRALIA is, with the single exception of Western Australia, the largest in area of the Australian Colonies, and it stretches across the whole island continent from south to north. Its southern shores are washed by the Southern Ocean, whilst the waters of the Indian Ocean lave its northern coasts. It touches all the mainland Colonies of Australia, being contiguous to New South Wales, Victoria, and Queensland on the east, and is bounded on the west by the extensive Colony of Western Australia, extending from lat. 38° to 26°, between the 129th and 141st meridian of east long., and from lat. 26° to the northern coast, between the 129th and 139th meridians. Running right up through the centre of Australia, it covers an area extending from latitude 38° to latitude 11°, and from the 129th to the 141st meridians of east longitude. Twice since the establishment of the Colony its limits have been extended. In 1861, a strip of land between the boundaries of South and Western Australia, south of lat 26°, was detached from New South Wales and annexed to South Australia by the Imperial Legislature (*vide* P.P. 180 of 1861); and in 1863, after the adventurous journey of the gallant explorer, John McDouall Stuart, across the heart of the Australian continent, the northern boundary of the Colony, which was originally the 26th parallel of latitude, was shifted to the northern coastline, thus bringing within her borders the large area now known as "The Northern Territory."

The area of South Australia (including the Northern Territory) is 578,361,600 acres, an area which affords "ample scope and verge enough" for an extensive population. At the present date (January, 1886) 10,642,963 acres have been alienated; the remainder being available for agricultural, pastoral, and mineral settlement. The area of mineral land, or land held under mineral lease, is comparatively small, so that, roughly speaking, the whole Province may be divided into country of two classes—agricultural and pastoral land. Of the alienated land, a very large

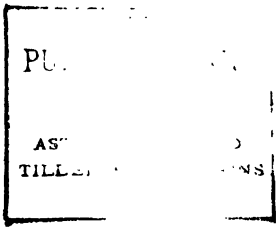
proportion is devoted to agriculture, horticulture, viticulture, market gardening, and like purposes, whilst the balance is used almost exclusively for raising sheep and cattle. The liberalisation of the land laws, some years ago, gave an enormous stimulus to agricultural settlement, so that the area now under wheat is immensely larger than it was.

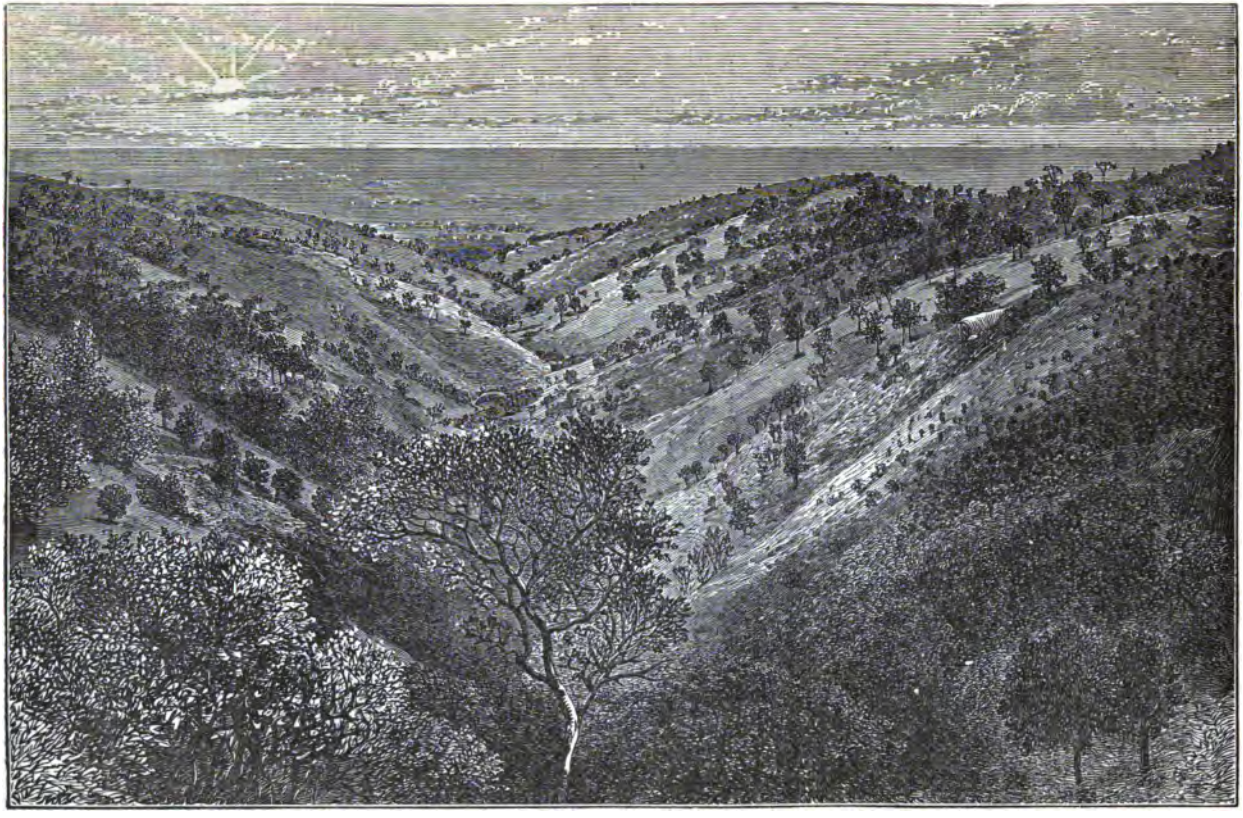
## Chapter IV.—GENERAL DESCRIPTION OF THE COLONY.

THE southern coast-line of South Australia (including Kangaroo Island) is very extensive, being 2,300 miles in length, and a glance at the map will show that the seaboard is indented by two large gulfs, called Gulf St. Vincent and Spencer's Gulf. Glenelg, at which the P. & O. steamers call on their way to and from England, and the Semaphore (near Port Adelaide), at which the Orient steamers touch, are on the eastern shores of Gulf St. Vincent. Between these indentations is a peninsula known as Yorke's Peninsula, which, a few years ago, was all held by squatters, for raising sheep, but has now almost entirely passed into the hands of agriculturists. Generally speaking, the colony —within the limits of settlement—may be described, in its physical features, as consisting of hill and plain. A fine rich plain stretches eastwards from the coastline till it is intercepted by a succession of hills known as the Mount Lofty Range; and beyond this broken country, occur other wide undulating plains called the "Murray Flats," which slope down towards the Murray River. The Mount Lofty Range, as it goes northwards, merges into the Flinders Range, which gives place in turn to other ranges, altogether extending hundreds of miles up the centre of the Province. This mountain range forms an extensive watershed and numerous watercourses—more or less permanent—flow from the hills, and fertilise the lower lands. For years past the coast plain has been under cultivation. For many miles, you travel through a succession of farms. Here and there are farmers' homesteads, with an occasional more pretentious-looking building, indicating the residence of one of the gentry. Dotted over the plains, too, are the towns and hamlets ("townships" they are called in Australian parlance), in some of which may be observed the conveniences, and even the elegancies, of city life. Some portions of the mountain range are very fertile, and numerous orchards and vegetable gardens, besides ordinary farms, may be seen upon

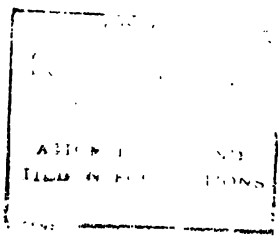


Steamboat on River Murray.





The Waterfall Gully, near Adelaide.

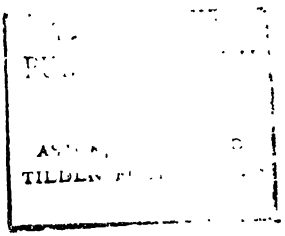


the hill sides, or nestling snugly in some of the rich valleys. The "Murray Flats" are being rapidly brought under cultivation. For many years these eastern plains were held chiefly as sheep-walks, but the liberalisation of Land Laws has led to the selection of large tracts of this country for agricultural settlement. Farming operations have been carried as far north as Beltana, but the rain-fall is uncertain in the more northern districts, and, consequently, the results are somewhat precarious. The Far North consists largely of what is known as myall or saltbush country, names given to it from the characteristic timber or shrubs which grow upon it. This country is of a lacustrine character, many of the lakes being of great extent, others forming chains of lagoons, or waterholes. Almost all the lakes are salt and low-lying, Lake Eyre being thirty feet below sea level. West and north-west of Lake Eyre the country rises to a considerable elevation, the Musgrave and MacDonnell Ranges being several thousand feet above the sea. The whole of this Far North country, lying north and east and west of Port Augusta, is only suitable for pastoral or mineral occupation. Lying between the River Murray and the Victorian boundary is a large area which is known as "The South-Eastern District." Wide tracts of this district comprise sterile sandy land, of little use even for pasturage, but here and there are spots of great richness. These have been eagerly selected, and have proved the centres of thriving agricultural populations. This district was formerly volcanic, and the craters of extinct volcanoes, in the neighborhood of Mount Gambier, are a feature of the district. The country around Mount Gambier is exceedingly rich. The climate also is mild and temperate, and English plants and flowers grow luxuriantly there.

The absence of rivers is very noticeable in Central Australia. In that part of South Australia there is only one really navigable river, the Murray by name. This river, taking its rise near the boundary of Victoria and New South Wales, empties itself into the Southern Ocean at Encounter Bay. The Murray and its tributaries are navigable for many hundreds of miles, but the navigation of the mouth is rendered hazardous by the shifting nature of a sandy bar, which presents serious obstacles to shipping. Adelaide stands upon the River Torrens, which, although not

navigable, is the source of the supply of water to the city and suburbs. There are a few other permanent streams, but none of them call for special notice. In the Northern Territory, however, there are several fine rivers, among them the Victoria, Roper, Daly, Adelaide and other large streams.

Adelaide Plains, viewed from Mount Lofty Range.

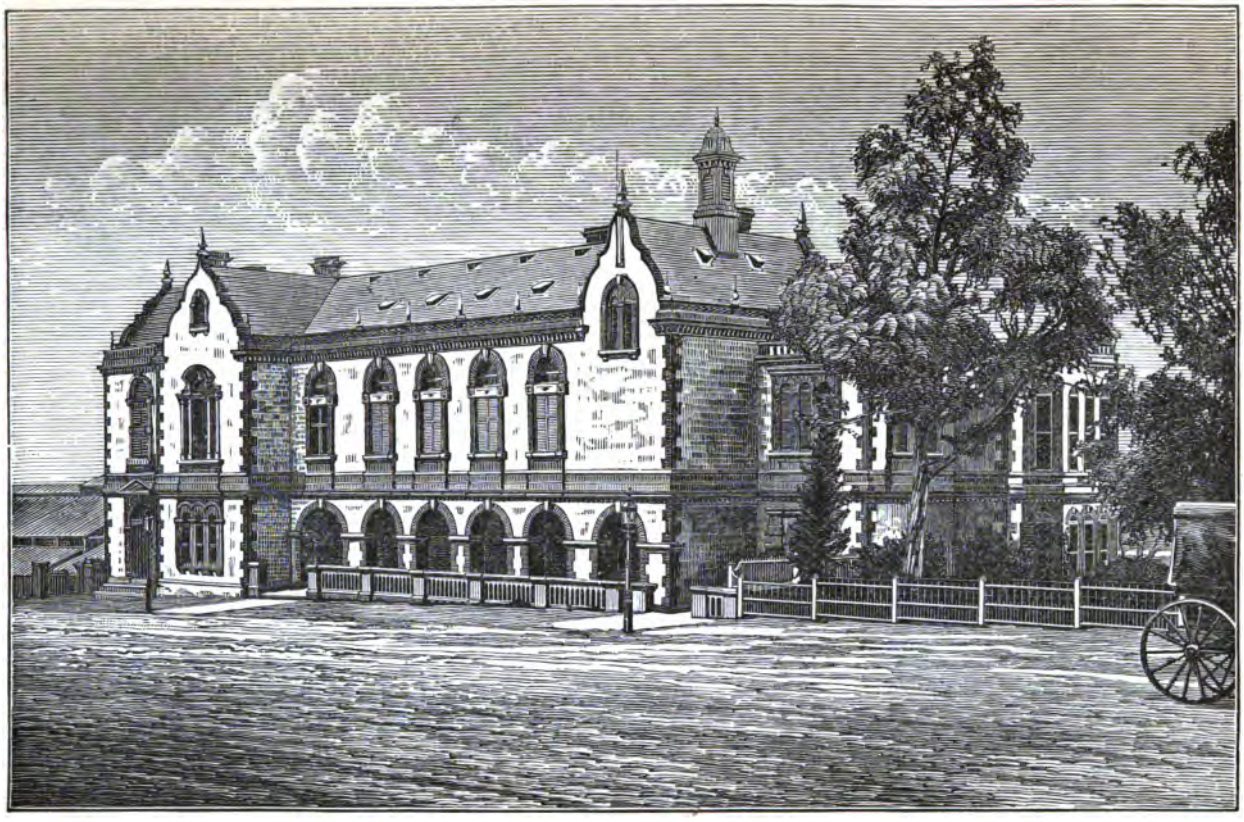


## *Chapter V.—CONSTITUTION.*

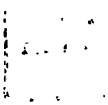
THE Sovereign is represented by a Governor, who is appointed by the Imperial Government. The present Governor is Sir W. F. C. Robinson, K.C.M.G.; and His Honor the Chief Justice (the Hon. S. J. Way) holds a dormant commission, which empowers him to assume office during the absence of the Governor from the Province, or on other specified contingencies arising. The Executive Council of Government consists of the Governor, the Chief Justice, and the members of the Ministry for the time being There are two Houses of Legislature—one called the Legislative Council, and the other the House of Assembly. The Legislative Council is composed of twenty-four members, who are returned by four Electoral Districts. Members of the Council must be natural-born or naturalised subjects of Her Majesty the Queen; of thirty years of age, who have resided for not less than three years in the Colony. The qualification of electors for the Legislative Council is the possession of a freehold of the value of £50, or a leasehold of £20 annual value, or the occupation of a dwelling-house of £25 annual value. The elector must also be twenty-one years of age, a natural-born or naturalised English subject, who has been a registered voter for not less than six months. Formerly, the Council consisted of eighteen members, who were returned by the whole Colony as one Electoral District, and retired in batches of six members every four years. By "The Constitution Act Further Amendment Act, 1881"—Her Majesty's assent to which was proclaimed April 11th, 1882—however, the constitution of the Council, or "Upper House," as it is termed, was altered as indicated above—six new members were elected to bring up the number of the members to twenty-four; and thenceforward eight members will retire every three years—two members in each of the new Electoral Divisions. In the first Constitution Act, the elections for the Legislative Council took place quadrennially, and, except on the occasion of the periodical retirement of members, the House could not be influenced by current

popular opinion. In order to save the Colony from the disasters of a deadlock similar to that which has occurred in the history of other Colonies, the Legislature passed an Act altering the constitution of the Council by making it more amenable to the influence of public opinion. Whenever any Bill for any Act shall have been passed by the House of Assembly during any Session of Parliament, and the same Bill, or a similar Bill with substantially the same objects, and having the same title, shall have been passed by the House of Assembly during the next ensuing Parliament—a general election having taken place between such two Parliaments—the second and third readings of such Bill having been passed, in the second instance, by an absolute majority of the whole number of members of the said House of Assembly, and both Bills shall have been rejected by, or fail to become law in consequence of any amendments made therein by the Legislative Council, the Governor is empowered, though not obliged, to dissolve the Legislative Council and House of Assembly, and, thereupon, all the members of both Houses of Parliament vacate their seats, and members shall be selected to supply the vacancies so created. The House of Assembly, or "Lower House," is under Act No. 278 of 1882, composed of fifty-two members, who represent twenty-six districts. Elections are triennial, but the House is subject to dissolution by the Governor when circumstances arise to warrant such a course. The only qualification of a member of, or an elector for, the Assembly is that he must be a subject of Great Britain, twenty-one years of age, who has been on the electoral roll for six months. The elections are by ballot, the voting being taken between eight o'clock a.m. and six o'clock p.m. The President of the Council and the Speaker of the Assembly are elected by the respective Houses. The present President is Sir Henry Ayers, K.C.M.G. (one of the early colonists); and the Speaker is the Hon. Robert Dalrymple Ross, M.P., formerly an officer in the Imperial army.

The practice of the Houses of the Legislature is based upon that of the Imperial Parliament, the Constitution Act empowering each branch to frame Standing Orders for the regulation of proceedings and the orderly conduct and despatch of business. When approved by the Governor, these rules are binding and of force.



Parliament Houses North-terrace.



The Legislative Council and House of Assembly alike provide that the usages of the House of Commons shall be observed, unless other provision is made; and the Standing Orders of each House are based upon a manual of "Rules, Orders, and Forms of Proceeding of the House of Commons Relating to Public Business," drawn up, under the direction of the Speaker, by Sir T. Erskine May, in 1854. Hence, the practice of the House of Commons requires to be regularly observed and mastered by those charged with the business of Parliament, and more especially in the case of the House of Assembly—the branch of the Legislature which is analogous to the House of Commons.

By what may be termed a modified system of the Cloture, the business of the House has been greatly facilitated; and, while its application has in no case restricted the just rights and liberties of individual Members, it has prevented those scenes which of late years have so embarrassed the House of Commons, paralysed its legislative functions, and subjected the House at large to the oppression of a minority organised to carry out obstruction. Thus, motions to adjourn the House in the middle of a debate, to adjourn the debate, or to divide, which, if debated, might easily be converted into instruments of obstruction, though always in order, if made without interrupting a Member in possession of the Chair, must be moved and put without debate, while, if negatived, they cannot be again put until an interval has elapsed.

If a Member has any matter of urgent importance to bring before the House, he can do so by a motion, made before the regular business of the day is called on, to adjourn the House to some time other than the period fixed by the sessional order. But only one such motion can be made at one sitting, the discussion is limited to the matter brought under the notice of the House, and, on any Member objecting, the discussion immediately ceases. In this way the House can relieve itself from frivolous motions which might delay business, while, if the matter is of evident urgency and importance, a Member is always allowed the opportunity to ventilate it.

By the Privilege Act, No. 14 of 1872, both Houses enjoy the same privileges as were possessed by the House of Commons at the time of the passing of "The Constitution Act" (No. 2 of

1855-6); and these privileges are not confined to the Houses in their corporate capacity only, but attach to the Committees and Members of each respectively.

The Ministry consists of six members of Parliament, and the practice is to take five from the House of Assembly and only one from the Legislative Council; but there is no rule in this matter; it is regulated by the discretion of the gentleman who may be entrusted with the formation of the Ministry.

Municipal institutions flourish in the Colony. In the city and many of the provincial towns there are corporations, with mayors, aldermen (in the case of the City of Adelaide), and councillors; and in the country districts there are bodies for local government, called "District Councils," which possess rating powers, and are charged principally with the execution of works of local improvement and development. The money expended by these councils on public works is supplemented from the general revenue. The operation of this system of self-government has been most beneficial in opening up means of communication throughout the country, and carrying out other important works.

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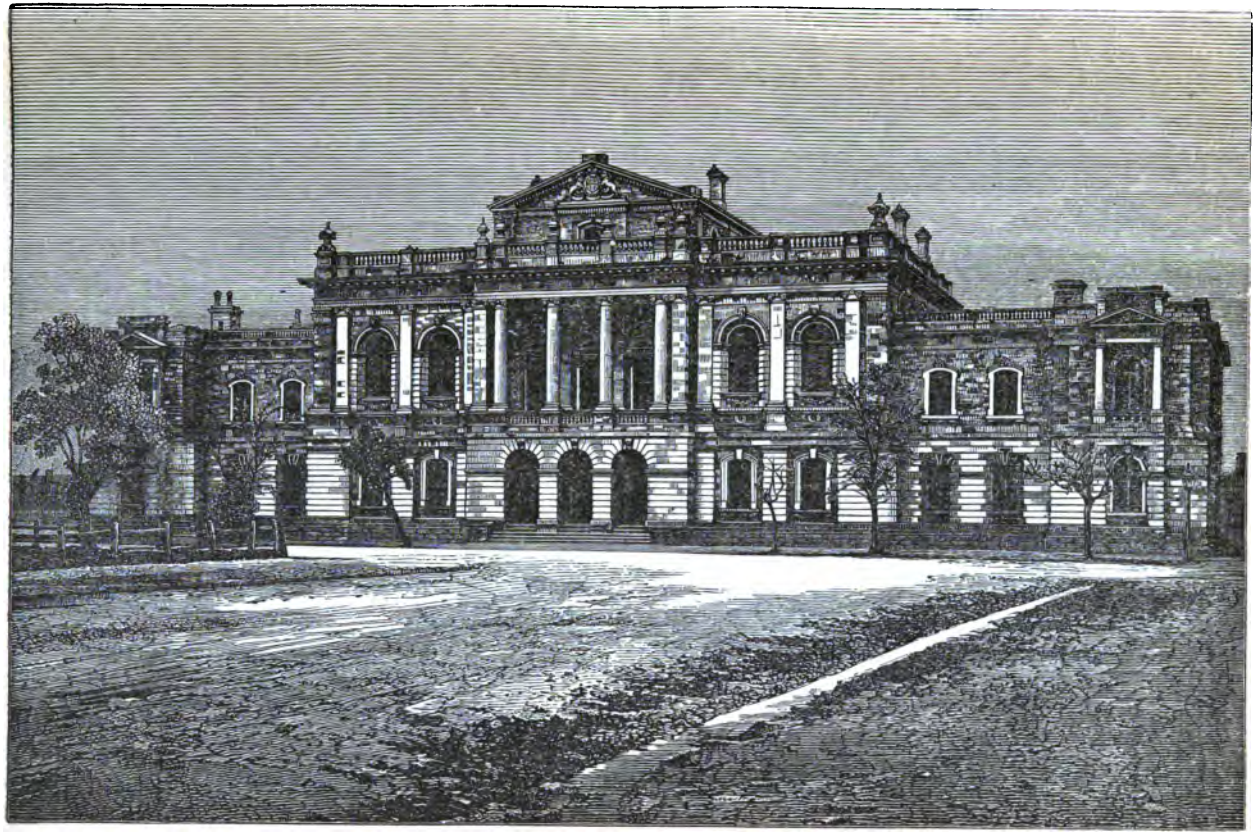
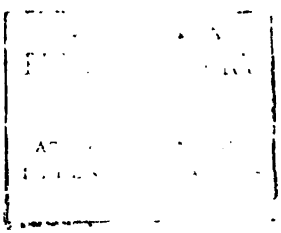
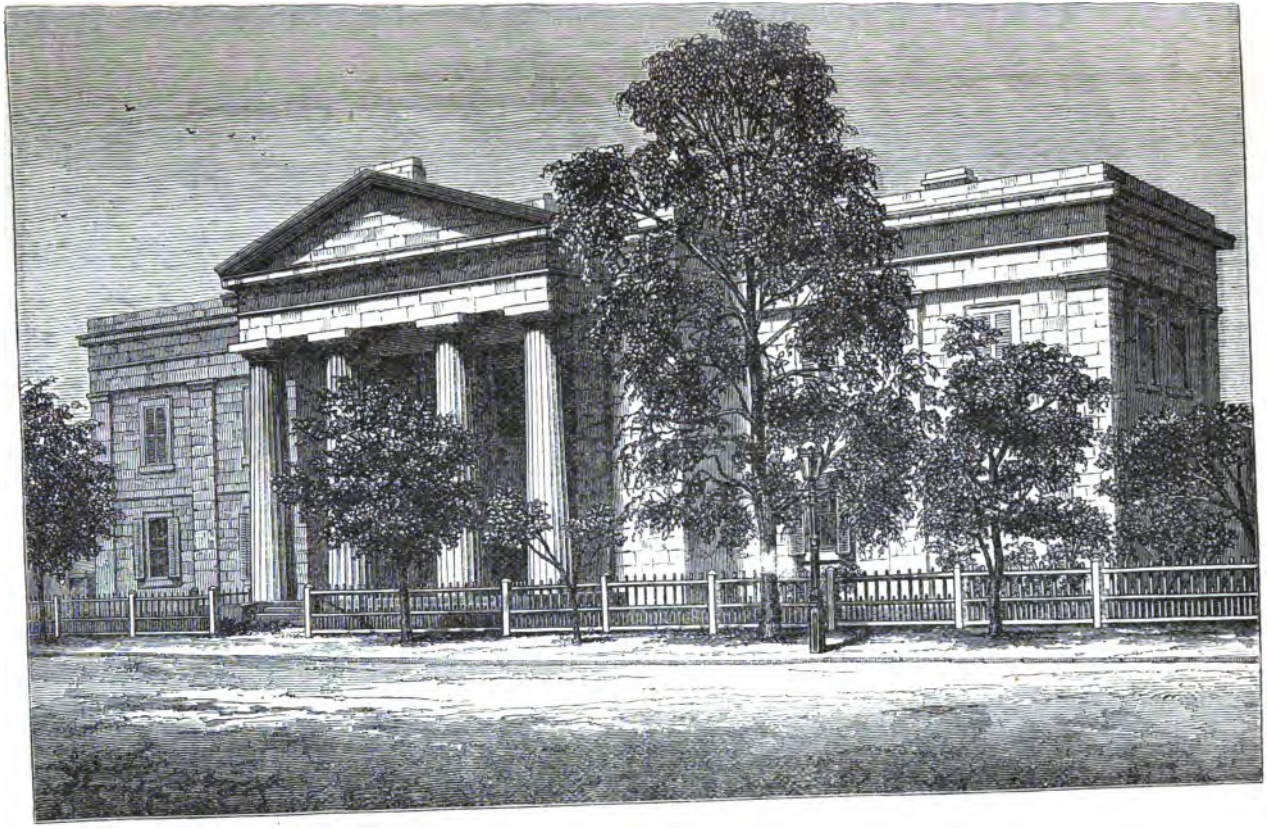
NOTE. – In view of the constant reference to the practice of the House of Commons, the Clerk Assistant of the House of Assembly (Mr. E. G. Blackmore), has compiled from *Hansard*, and published in convenient form, the decisions given from the Chair of the House of Commons on Points of Order, Rules of Debate, and the General Practice of the House, by Mr. Speaker Denison (1857-1872) and Mr. Speaker Brand (1872-1882). These collections have been highly commended by Mr. Speaker Brand, Mr. Speaker Peel, Dr. Lyon Playfair (late Chairman of Committees, House of Commons), Sir T. Erskine May, K.C.B., the Clerk of the House, and other authorities, and have been favorably reviewed in *The Times*. The same writer has also completed an exhaustive work on the whole practice and procedure of the House of Assembly, as governed by its Standing Orders and the practice of the House of Commons, illustrated by precedents from the journals of the House of Assembly and the House of Commons. In the Dominion of Canada, Mr. Todd and Mr. Bourinot have published standard works on Constitutional and Parliamentary Law, History, and Practice; but the works above referred to are the only ones of their character published in the Australasian Colonies.

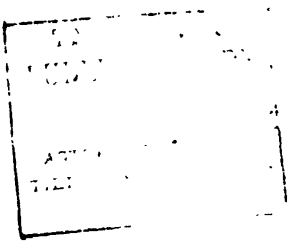


The Supreme Court.





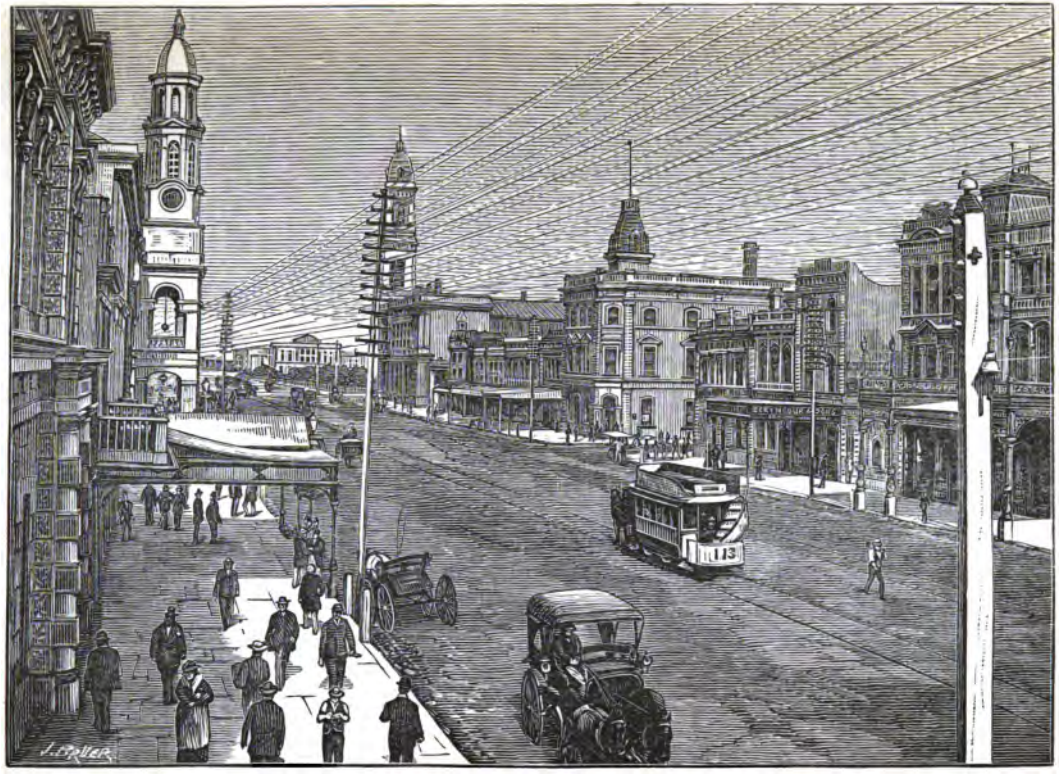
The Local Court.



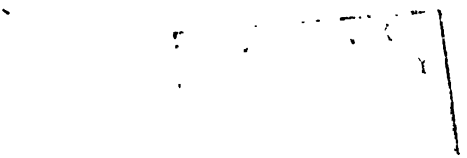
## *Chapter VI.—THE CITY OF ADELAIDE.*

THE City of Adelaide is the metropolis of the province, and is in 34° 57′ S. lat. and 138° 38′ E. long. Adelaide, so named after the Queen of William IV., stands upon the banks of the River Torrens—a mountain stream which flows down from the Mount Lofty Ranges and debouches over low-lying flats in close proximity to the eastern shore of St. Vincent's Gulf, into which some of its waters ultimately find their way, and from this stream Adelaide obtains its water supply. As it passes through the city, its waters are impounded to form an ornamental lake, on which the citizens are able to take boating exercise, and enjoy aquatic sports. The city covers an area of five and three-quarter square miles, including the park lands. Situated upon a wide-stretching and fertile plain, commanding at many points a fine view of Gulf St. Vincent to the west, and shut in on the south and east by a magnificent amphitheatre of hills, Adelaide is justly noted for its picturesqueness and beauty. It is divided by the River Torrens into two parts—South Adelaide (which is the business part of the town) and North Adelaide (which is mainly devoted to residences of the people)—and between these two divisions there is a large area of reserved, or park lands, through the centre of which runs the river. The whole city is also environed by an extensive belt of park lands, the entire area of which comprises nearly three and a half square miles, which afford facilities for the outdoor recreations and pleasures of the people. The streets are laid out rectangularly, those running north and south being intersected by streets running east and west; and several reserves, or "squares," or "places," as they are termed, are laid out and planted, and surrounded by ornamental iron fences. At the present time it is difficult to believe that in the early days the site of the city and its general arrangements were very warmly condemned. It is almost universally conceded now, however, that Colonel Light exercised a wise discretion in the selection he made, and that his reasons for doing so, as fully explained by him in defending

his choice, have been fully borne out by experience. It is with somewhat mournful feelings that we read in the present day Colonel Light's reproachful remarks in the preface to his journal, published in 1839; but a perusal of them shows how firmly he believed in the wisdom of the selection he had made, and how convinced he was that posterity would approve his choice. "The "reasons that led me to fix Adelaide where it is," he writes, "I "do not expect to be generally understood, or calmly judged of at "present. My enemies, however, by disputing their validity in "every particular, have done me the good service of fixing the "whole of the responsibility upon me. I am perfectly willing to "bear it, and I leave to posterity, and not to them, to decide "whether I am entitled to praise or blame." Posterity has approved the wisdom of the choice, and has accorded to the memory of Colonel Light the praise which is due to him, not only for the site which he selected, but also for the skill and foresight he displayed in planning out the city. Adelaide is now furnished with all the conveniences of modern city life, although it numbers in population a mere handful of people—only 43,000 souls, or about 100,000 or 110,000 souls, including the population of the suburbs. Its streets are broad and well made; many of its foot-paths are paved with slates or tar paving. It is lit with gas by a private company, which has proved a remunerative undertaking. Its water supply is a very complete and successful scheme, and within the last two or three years the city has had applied to it a system of deep drainage, which has tended to make Adelaide one of the cleanest cities in the southern hemisphere. It possesses baths and botanic gardens, which latter have been so tastefully laid out, and are so well kept, as to be the theme of general admiration. It has two markets—one the property of the city corporation, the other belonging to a private company. It is the seat of a university, and possesses also a museum, public library, art gallery, and circulating library; and amongst other public buildings it has Government offices, hospitals for the sick, insane, and destitute, numerous churches, and public and private schools, three theatres, a fine post office, and is extensively served with postal, telegraphic, and telephonic conveniences. It is also exceedingly well supplied with horse tramways, nearly all the suburban population having



King William-street, looking South.



been brought into communication with the metropolis by this facile means of transport. The tramways are all the property of private companies, some of which yield handsome returns to the shareholders. The tramway system of Adelaide is one of the most striking features that presents itself to visitors.

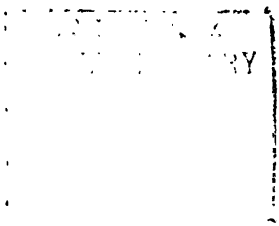
The town hall and municipal offices are imposing buildings, fronting King William and Pirie streets. The hall itself is a spacious and handsome room, capable of seating about 1,500 persons, and attached to it is a very elegant banqueting-room, below which is the Council Chamber, a well-appointed room. In the hall there is a large organ, by Hill, of London, upon which Professor Ives —the Professor of Music at the Adelaide University — gives weekly recitals, alternately afternoons and evenings. The city boasts of its civic insignia, such as mace and chain, loving-cup, and large silver bowl, which on suitable occasions are exhibited.

With a view to give some idea of the advancement made by the city, the following information, compiled by Mr. Thomas Worsnop, Town Clerk of Adelaide, will be of interest:—

There are fifty-one main streets in the city—none less than one chain in width; others being a chain and a half wide, and others again two chains wide, whilst the roadways on the terraces are two and a half chains wide. There are 370 streets in the city, measuring in length eighty miles. All of these streets are macadamized, and have the watertables paved and the footpaths kerbed. The footpaths in the main streets vary from 10ft. to 20ft. in width, whilst those in private streets are about 4ft. or 5ft. in width. There are thirty roads across the park lands and fifty-seven footpaths. These supply means of communication between the city and numerous suburban settlements. These roads measure twelve miles in length, and the footpaths are twenty-five miles in length. The Torrens is spanned by several bridges, which afford means of easy communication between North and South Adelaide. Three bridges have been erected by the city corporation, and are named the "Adelaide," the "Victoria," and the "Albert." These are iron-girder bridges, and are respectively 110ft. long by 54ft. wide, 172ft. by 37ft, and 130ft. by 42ft. An iron-lattice-girder footbridge has been built over the weir which impounds the waters of the Torrens Lake; the length of this bridge is 137ft. 3in.

Then there are two other iron-girder bridges just outside the city boundaries, one at Hindmarsh, which takes the heavy traffic on the road from Port Adelaide, and one near Hackney, which accommodates also a very large traffic. There are ninety miles of footpaths in the city, forty-two miles of which have been tar paved; four miles have been flagged with slate and marble, and the remainder will, it is expected, be asphalted during the next two or three years. The "Squares" and "Places" are reserves which were made in the original survey. The principal square, named "Victoria," is eight acres in area, and four others in the southern part of the city comprise six acres each. In North Adelaide, there is one square, named Wellington, which comprises six acres; and three "Places"—Brougham-place including nine acres, Palmer-place four acres, and Roberts-place one acre. These squares have recently been enclosed with handsome iron palisading, which is a great improvement to the city. The park lands originally comprised 2,300 acres, but the Government have taken possession of 500 or 600 acres, leaving about 1,700 acres under the care of the City Corporation. The park lands have been enclosed with 110 miles of post-and-rail fences, but these wooden fences are being replaced along the terraces by a neat patent cable-wire fence. At present ten miles of seven-wire cable fencing have been erected. On the east park lands is a racecourse, comprising 120 acres. On it are built two handsome grandstands, with lawns and every other accommodation for the patrons of the turf. On the north park lands also is a cricketing oval—a reserve of twelve acres, leased to private persons. The oval has been laid down with grass and surrounded with a chain fence, and the outside grounds have been planted with ornamental forest trees, whilst a handsome pavilion, with lawns, &c., attached, has been built—the whole enclosure being surrounded by a neat white picket fence. The park lands have been extensively planted—from 60,000 to 70,000 trees having been planted in avenues, along the roads, or in ornamental clumps. Adelaide is a well lit, well drained, and well watered city. It is lit by gas by a private company, which has extensive works at Brompton and Thebarton, two suburban towns. These works consume 25,000 tons of coal annually, make 3,500,000 cubic feet of gas weekly for storage in four gasholders, one holding

Town Hall and Government Offices.



70,000ft., a second 100,000ft., another 250,000ft., and a fourth 1,000,000ft. There are 230 miles of gas mains in the city and suburbs. The waterworks are under the control of the Government. The water supply is abundant and constant, coming direct from two storage reservoirs of a total capacity of 884,500,000 gallons. The daily consumption is about 3,200,000 gallons, or a total annual consumption of 12,000,000,000 gallons. There are upwards of eighty-nine miles of water mains within the city, and a much greater length within the water area surrounding the city. The total cost to 30th April, 1885, of the waterworks of Adelaide and its suburbs was £874,161, and the annual income derived from the city for water is £57,732. The system of underground drainage which has been adopted is also under the control of the Government. There are seventy-three miles of catchment sewers and branch drains, and the sewage from the town is utilised on a sewage farm comprising 450 acres, and situated about four miles from the city. The total cost of the drainage works has been £347,000, and the sewage rates of 9d. in the pound in the city and sales of produce at the Sewage Farm yield a revenue of £22,600. Adelaide is the centre of a very extensive system of telegraphic communication. The first telegraph line in the colony was opened in February, 1856. It was a private line between the city and Port Adelaide, about seven miles in length. The first four days' receipts only amounted to 10s. 9d., and the revenue for 1856 was £366 6s. 7d. Now there are 5,280 miles of line and 8,800 miles of wire in the colony, and the revenue of the telegraph department during 1883 was £39,352. It is an interesting historical fact that Adelaide was the first Australian capital which was brought within telegraphic communication with Europe—South Australia having constructed the overland telegraph across the centre of the Australian continent, and having thus brought Australia into the world's telegraphic circuit. The railway system of South Australia also centres in Adelaide. At the close of 1883-4 there were 1,036 miles of railway open for traffic in the colony, and 400 miles in course of construction. During 1883-4 about 5,000,000 passengers were carried on these railways, and about 1,000,000 tons of goods. The total bonded debt of the

colony on account of railways is about £10,050,000. As has been already stated, the tramway system of Adelaide is a striking feature. The first tramways were laid down and opened in 1877 by the Adelaide and Suburban Tramway Co.; now there are eight tramway companies, working sixty-two and a quarter miles of lines. The whole of these tramways are worked by horse traction, and this facile means of communication has become very popular. The Botanic Gardens of Adelaide were established in 1855, and are generally admitted to be a great triumph in landscape gardening. Attached to the garden is a pretty botanic park, which was laid out with much taste and ability by the director, Dr. Schomburgk. In the park is a broad "drive"—the "Rotten Row" of Adelaide. There are eleven banks in Adelaide, nine of which are situated in King William-street, the main thoroughfare of the city. Here also are the Town Hall, Treasury buildings, General Post Office, courts, and other departmental offices, and several warehouses, offices, and shops. In Rundle and Hindley streets there are numerous tradesmen's establishments, where plate glass window fronts and handsome decorations evidence a high development of artistic taste.

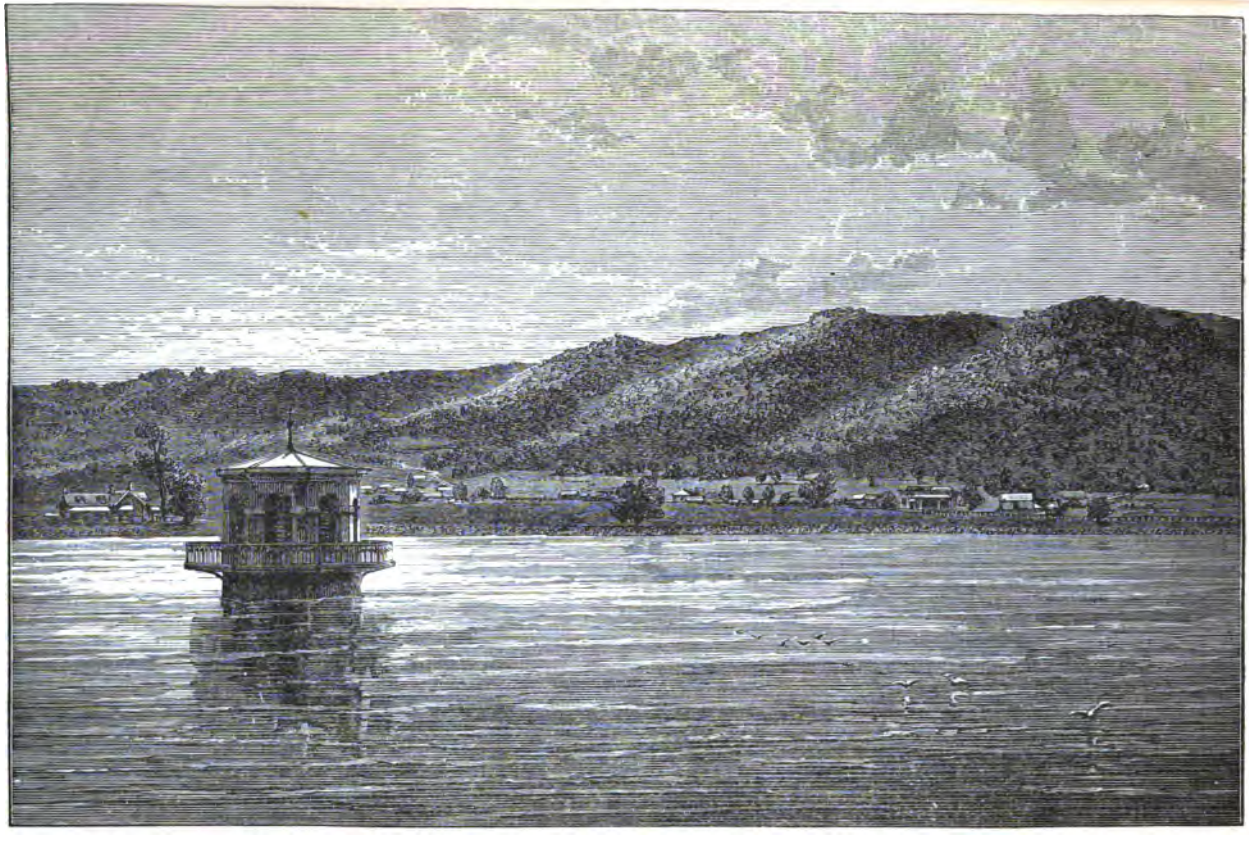
The government of the city is vested in a municipal council consisting of a mayor and six aldermen (who are elected by the whole body of the citizens, and retire annually in rotation) and twelve councillors (two for each of six wards). The council levies rates which at present are subsidised by the Government in the ratio of pound for pound when expended in making or repairing roads, streets, or bridges. The council also acts as a local board of health. The revenue of the city is derived from three sources—from rates, from Government subsidy, and from licence fees and other extraneous sources. At present the city rates amount to 1s. 6d. in the pound, 1s. for general purposes, 2d. for health, 3¼d. for street lighting, and ¾d. for park lands improvement; and these rates are levied on an assessment or ratable annual value of £500,000. The total income of the corporation for 1884 was £86,685, and from 1852 to 1884 the total income of the corporation has amounted to £1,270,000, of which amount £1,070,000 has been expended on roads, streets, bridges, markets, and other public works, the balance being spent in interest on and reduction of

General Post Office.

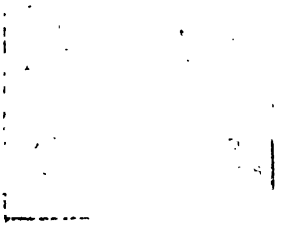
loans, management, parliamentary and legal expenses, and the purchase of property. In the original survey of Adelaide, one acre was reserved for corporation purposes, and upon this acre have been erected the noble structure known as the Town Hall Buildings. The bonded debt of the city amounts to £81,200, part of which is at 6 per cent. and part at 5 per cent. The value of the real property belonging to the corporation is estimated at a quarter of a million sterling. Nothing is more indicative of the substantial progress made by the city than the enhanced value of city properties. *In January,* 1837, *Colonel Light commenced the survey of Adelaide, and in March of that year the first blocks were sold, the whole proceeds of* 1,042 *acres realising less than* £4,000. *The estimated value of real property at the present time within the city boundaries, exclusive of the park lands and squares, is not less than* £7,500,000, *whilst the value of the buildings, &c., erected thereon may be set down as equal to at least* £10,000,000 *more. Land is worth as much as from* £400 *to* £600 *per foot in the principal streets.*

The municipal history of Adelaide is invested with exceptional interest. For many years it was believed that Adelaide was the first colonial city in the British Empire to adopt municipal institutions, and this was emphatically stated to be the case by Sir James Hurtle Fisher, the first Mayor of Adelaide, who, on his retirement from office, said—"It will ever be a proud reflection with me "when I recollect that I have been placed, not only in the honor- "able position of the first resident Commissioner of the Province, "but that of the first Mayor of the first Corporation estab- "lished in any of the British colonial possessions." This appears not to have been strictly correct—Montreal, in Canada, having had municipal institutions prior to 1840, the year in which an Act was passed to constitute the City of Adelaide an elective municipal institution. These early years of the infant settlement proved to be very troublous times, because of an alleged informality in connection with one of the elections—an informality which was held to affect the validity of the Council, and because also of a serious breach which took place between the then Governor, Captain (now Sir George) Grey and the City Council. The Council lingered on until 1843, when it became extinct; and

between 1843 and 1852 municipal institutions did not exist, the care of the city being entrusted to five commissioners (of whom Sir Samuel Davenport is the only survivor), who had power by Act of Council to levy rates, repair roads and streets, &c. In June, 1852, a new City Council was elected, and from that time to this—though with various alterations as to constitution, &c. - the affairs of the municipality have been conducted by an elective council. The present condition of Adelaide is a high tribute to the ability and enterprise displayed by the civic authorities, and to the readiness with which the citizens have subscribed the necessary funds for carrying out requisite public works.



**Reservoir, Thorndon Park.**



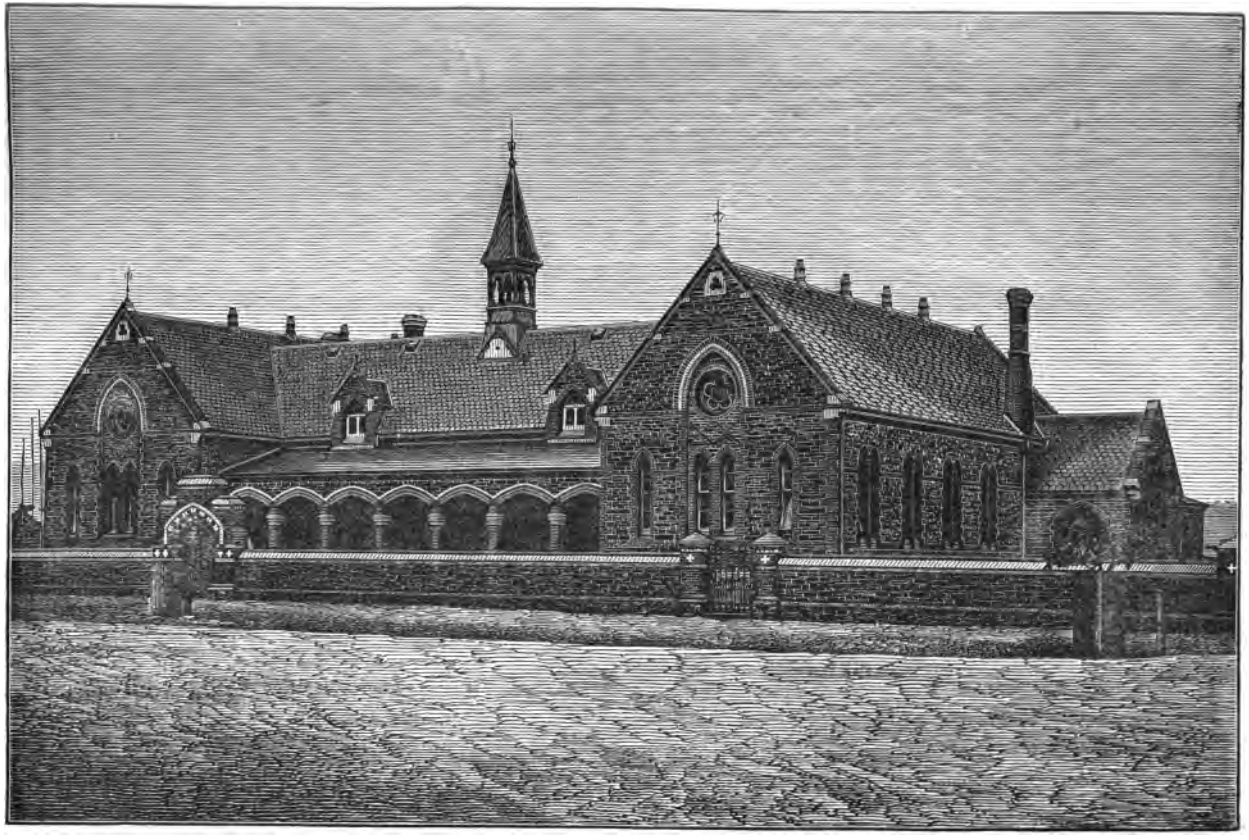
## *Chapter VII.—THE EDUCATION OF THE PEOPLE.*

In educational matters South Australia holds a high position. She possesses a splendid system of public schools and private seminaries, which give efficient primary instruction, whilst higher up in the scale of educational advancement she has several fine colleges (under private management), and at the apex of the educational system she can boast of a university.

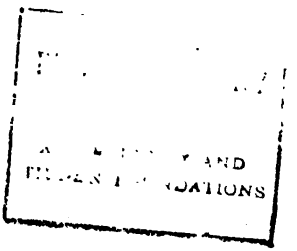
### PUBLIC SCHOOLS.

Very early in the history of the province, the education of the people received legislative attention. The first Act relating to Education was passed in 1847. This was superseded by Act No. 20 of 1851, the expressed object of which was to impart good secular instruction based upon the Christian religion, apart from all theological and controversial differences on discipline and doctrines. A Central Board of Education was established, and provisions made that education should be carried out as far as possible on the self-supporting principle, except so far as the schoolhouses were concerned, and with reference to these, the Board was authorised to subsidise the cost of erection. As a matter of fact the education was not self-supporting, Government grants being given to "licensed" schools. Altogether the Act of 1851 laid the foundations of a useful system of public instruction. The growing needs of the province, however, called for further legislation, and in 1875 an Act was passed which abolished the Central Board of Education, established a Council of Education with a paid President, provided for the erection of Model Schools and a Training College, for the appointment of Boards of Advice, and for an annual dedication of land for Education purposes. Power was given to the Council to make regulations; attendance of children between the ages of seven and thirteen years was made compulsory; fees to be charged, were authorised; and four and a half hours per diem of secular instruction were provided for, with permission to the teacher to read from the authorised or Douay

Version of the Holy Scriptures, prior to the opening of the school, attendance thereat not being made compulsory; and authority was given to establish valuable exhibitions and scholarships. In 1878 the Council was dissolved, the administration of the department being transferred to the "Minister Controlling Education," assisted by an Inspector-General of Schools, with a staff of inspectors and teachers, and by the same enactment provision was made for defining "efficient" schools, and generally for the more satisfactory working of the compulsory clauses of the Act. Under these later Acts, the educational system of the province has undergone considerable development. The introduction of a higher class of teachers, the adoption of the best methods of teaching, and the employment of the highest educational appliances have been attended with very satisfactory results. At the close of 1884, there were 227 public schools and 225 provisional schools, or a total of 452. There have been added during 1885 four public, and sixteen provisional, making a grand total, according to the latest statistics available, of 472 schools. The net number of children instructed during 1884 was 42,758, and the average daily attendance was 25,048. The teaching staff, comprising head teachers, assistant teachers, pupil teachers, monitors, and sewing mistresses, numbered, at the close of 1884, 1,000 all told—400 males, and 600 females. About 390 schools have been erected since 1st January, 1876, at a cost (including sites) of upwards of £400,000, the bulk of which expenditure has been drawn from loan money. The Advanced School for Girls is an institution which is under the control of the Minister of Education, and was established in 1879. Its object is to carry on the studies of pupils beyond the standard of the ordinary curriculum of the schools; and it has served a most useful purpose in securing for girls a collegiate education at a comparatively small cost. The total expenditure upon education (exclusive of buildings) was, in 1884, £102,143 2s. 7d.; and the revenue from rents, fees, &c., was £25,263 12s. 8d., leaving a net cost to the State during the year of £76,879 9s. 11d. The scholarships, exhibitions, and bursaries that are offered form a very important feature in connection with the educational system. These are open to the pupils at public schools, and thus render accessible



**Model Schools, Adelaide.**

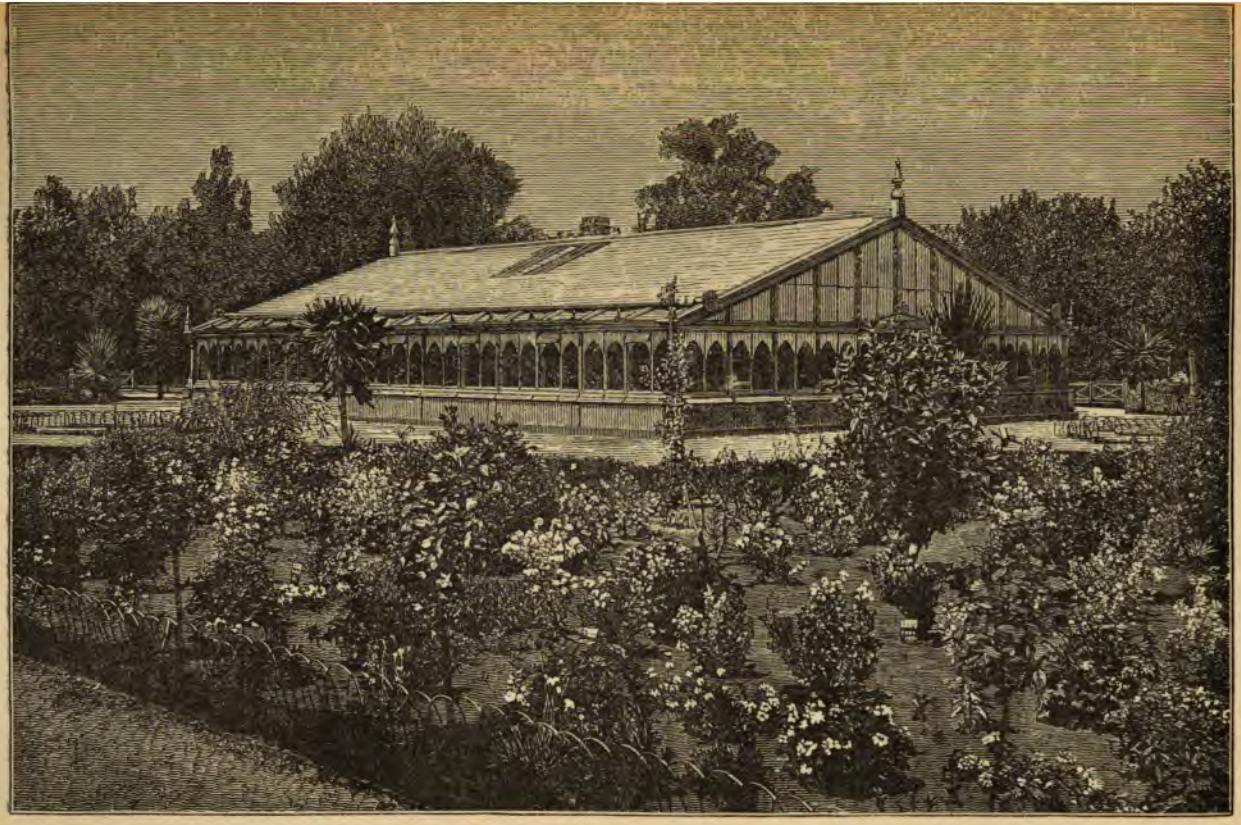

AND
RECOMMENDATIONS

to the children of the poor, as well as to the children of the rich, the highest advantages of education at the Adelaide University or at any approved European University. An illustration of this is given in the latest award of the highest honor offered by the Education Department—the South Australian Scholarship. In 1878 the scholar won an exhibition at one of the model schools. This entitled him to free education at Prince Alfred College (the seminary selected by him), and in 1884 he won the S.A. Scholarship, which secures to him an English Unversity education. In addition to the S.A. Scholarship (which is worth £200 per annum for four years) the Education Department offers annually three University Scholarships (worth £50 per annum for three years), which entitle the holders to education at the Adelaide University free of cost. Six exhibitions, for scholars at the public schools, of the value of £20 to £40 each, are also available annually, and entitle the holders to free education at any of the colleges which they may select. Bursaries of the value of £12 12s. are also offered by the Department to girls, so that it will be seen that substantial encouragement is given to the pupils of the public schools to win high educational distinctions.

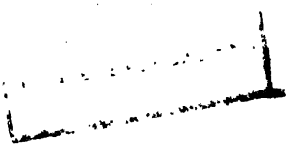
The Minister Controlling Education is the chief executive officer of the Education Department, and he is assisted by a permanent administrative officer—the Inspector-General of Schools—and a staff of inspectors and other officials, and about seventy Boards of Advice in various parts of the colony. The present Inspector-General is Mr. J. A. Hartley, B.A., B.Sc., formerly principal of Prince Alfred College. He was salaried President of the former Council of Education, and was appointed to his present position when the Council was abolished. Mr. Hartley is an enthusiastic educationist, and has worked arduously to organise and develop the present educational system. His high conception of the duties of himself and coadjutors in the department is tersely expressed in the following extract from his latest report:—"I should like "to feel that it is the ambition of all who are working in this "department to make our schools 'model' in the best sense of the "word—models of good discipline without harshness, of good "teaching without cram, and most important of all, of good moral "conduct based on sterling principle."

### Collegiate School of St. Peter.

This school originated in 1847. At that time an effort was made to establish a Church of England school, and the effort was so far successful that a proprietary was formed, who established a school under the title of the Church of England Collegiate School of South Australia. On the arrival of the Bishop of Adelaide (Dr. Short) in that same year he transferred to the governors of the school a sum of £2,000, which had been placed in his hands, as trustee, by the Society for Promoting Christian Knowledge, towards establishing a school, and £500 additional, on condition that accommodation was provided for four theological students. In April, 1849, the late Captain Allen gave a handsome donation of £2,000 towards the erection of school buildings, on condition that the property was vested in a council of governors, the bishop of the diocese for the time being to be the president and visitor; and in that same year the governors of the Collegiate School of St. Peter were incorporated by Act of the Legislative Council. Afterwards Captain Allen contributed a further sum of £5,000; the late Mr. John Ellis gave £1,172 10s.; the late Bishop Short £300; and many others were donors of £100 and upwards. The original school was opened in Trinity Church on July 15th, 1847, and on the Queen's Birthday, May 24th, 1849, the foundation-stone of the present building was laid. The school-room was finished in the following year, and in 1853 the present buildings were occupied. The buildings, upon which nearly £30,000 have been spent, consist of a chapel, schoolrooms, laboratory, gymnasium, boarding-house for masters and about fifty boys, headmaster's residence, and they stand in about thirty acres of playground. Considerable enlargements and improvements to the buildings are in contemplation. The school has no endowment except for scholarships, but these amount to nearly £400 a year, and arise from benefactions made by the late Dean Farrell, the late Mr. Vansittart, the late Sir Henry Young, the late Bishop Short, the late Edmund Bowman, Dr. Wyatt, Mr. P. D. Prankerd, the Commercial Travellers' Association, and others. The present principal is the Rev. F. Williams, M.A. (Oxon.), and the number of boys attending the school is 216. The late Mr. DaCosta left to the College a valuable estate, subject to certain life annuities, the estimated prospective value of which is upwards of £100,000.



Botanic Garden—"Victoria Regia" House.



### Prince Alfred College.

Prince Alfred College occupies a fine position facing the park lands that lie to the east of Adelaide. The site, about thirteen acres, was purchased towards the close of 1865 by some gentlemen connected with the Wesleyan Methodist Church, and the foundation stone of the building was laid on November 5th, 1867, by the Duke of Edinburgh. His Royal Highness, upon the same occasion gave permission for the college to bear his name. It is a handsome building in the Elizabethan style, presenting a facade 256ft. long, regular, but relieved by towers and colonnades. It is four stories, or 64ft. high in the central portion, and towers; three stories in the wings. There are spacious playing and ornamental grounds surrounding it, and large gymnasium, kitchen, &c., in the rear. The total cost has been close on £30,000. The late Mr. T. G. Waterhouse, and the Hon. John Colton, M.P., have been the largest contributors to the funds for erecting it. It was incorporated for educational purposes for all time by Act of Parliament in 1878; and its managing committee under that Act is annually appointed by the South Australian Wesleyan Conference. The range of studies includes all that is usually meant by the term "a liberal education," English, classics, mathematics, modern languages, natural science, drawing, music, singing, gymnastics. The religious teaching is undenominational, and exemption from it is provided for. Many of the boys each year pass the examinations held at the Adelaide University. It also renders important aid in the training of ministers for the Wesleyan and other churches. Several valuable scholarships have been founded, tenable either at the college or at the University. Latterly this college has been very prosperous. The Head Master is Mr. Frederic Chapple, B.A., B.Sc., (Lond.) The pupils number over 400; the regular masters, fifteen, five of whom are graduates, besides six who attend to give instruction in special subjects.

### Whinham College.

This institution is a useful and important private educational establishment. The college is situated at the corner of Ward and Jeffcott streets, North Adelaide, and stands upon about two and a half acres of land. It has grown out of a school which was estab-

lished in Adelaide in 1854, by Mr. John Whinham. Messrs. Whinham & Son are the principals of the college.

### Private Seminaries.

In addition to the public schools there are many private boys' and girls' schools and young women's seminaries, which still further complete the educational system of the province, as a number of these are conducted by talented and scholarly teachers. The Roman Catholics support a number of private schools and colleges, the dignitaries of that church refusing to sanction, where avoidable, the attendance of Roman Catholic children at the public schools.

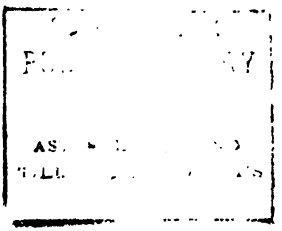
### School of Painting and School of Design.

These two schools are associated with the Public Library, Museum, and Art Gallery, and are doing useful work. The School of Painting is under the management of Mr. Tannert, formerly of Dresden, Düsseldorf, and there are fifty-two students all told in the various classes superintended by him. Mr. H. P. Gill, formerly of South Kensington, is the principal of the School of Design, which numbers 172 students on the roll in the various classes of designing and modelling, building construction, and machine construction. Both schools are serving a useful purpose —the former in stimulating and developing the artistic tastes of young people, and the latter in offering to artisans and apprentices the opportunity of qualifying themselves for the practical duties of the workshop.

### Agricultural College.

South Australia is the only colony amongst the mainland provinces of Australia which can boast of an Agricultural College. This institution is situated on the Government Experimental Farm at Roseworthy, about thirty miles from Adelaide, and was opened early in 1885 for the reception of students. The Principal is Professor J. D. Custance, formerly of Cirencester, and the object of the college is to teach the practice and science of agriculture, and to train and educate students for the business of farming. The students are divided into practical students and science students. The former are required to work regularly upon

Botanic Garden—The Rose Garden.



the farm, and thus acquire a thorough knowledge of the various operations, and of the different machines and implements employed, and they are paid for the work performed by them. With the science students farm work is optional, but the College certificate is only given to students who have practical knowledge of the operations of a farm. The education of the students is conducted on the farm and in the College, and comprises lectures, classes, field classes, practical work on the farm, in the laboratory, and in the workshops. The subjects taught include agriculture, chemistry and agricultural chemistry, geology, botany, mechanics, mensuration, land surveying, book-keeping, veterinary science, forestry, &c. There are now sixteen students at the College, but a much larger attendance is expected when the practical value of the training and instruction given at the College is better known. The College farm consists of 800 acres, comprising light sand and stiff clay. Pure bred Berkshire pigs and merino sheep are kept. Besides the carrying on of a system of practical or business farming, a series of experiments were commenced four years ago, which, when completed, will add considerably to the information at present possessed regarding agriculture under the peculiar conditions of climate and soil experienced by farmers. Particulars of these experiments are given in the annual report of the College.

### The Adelaide University.

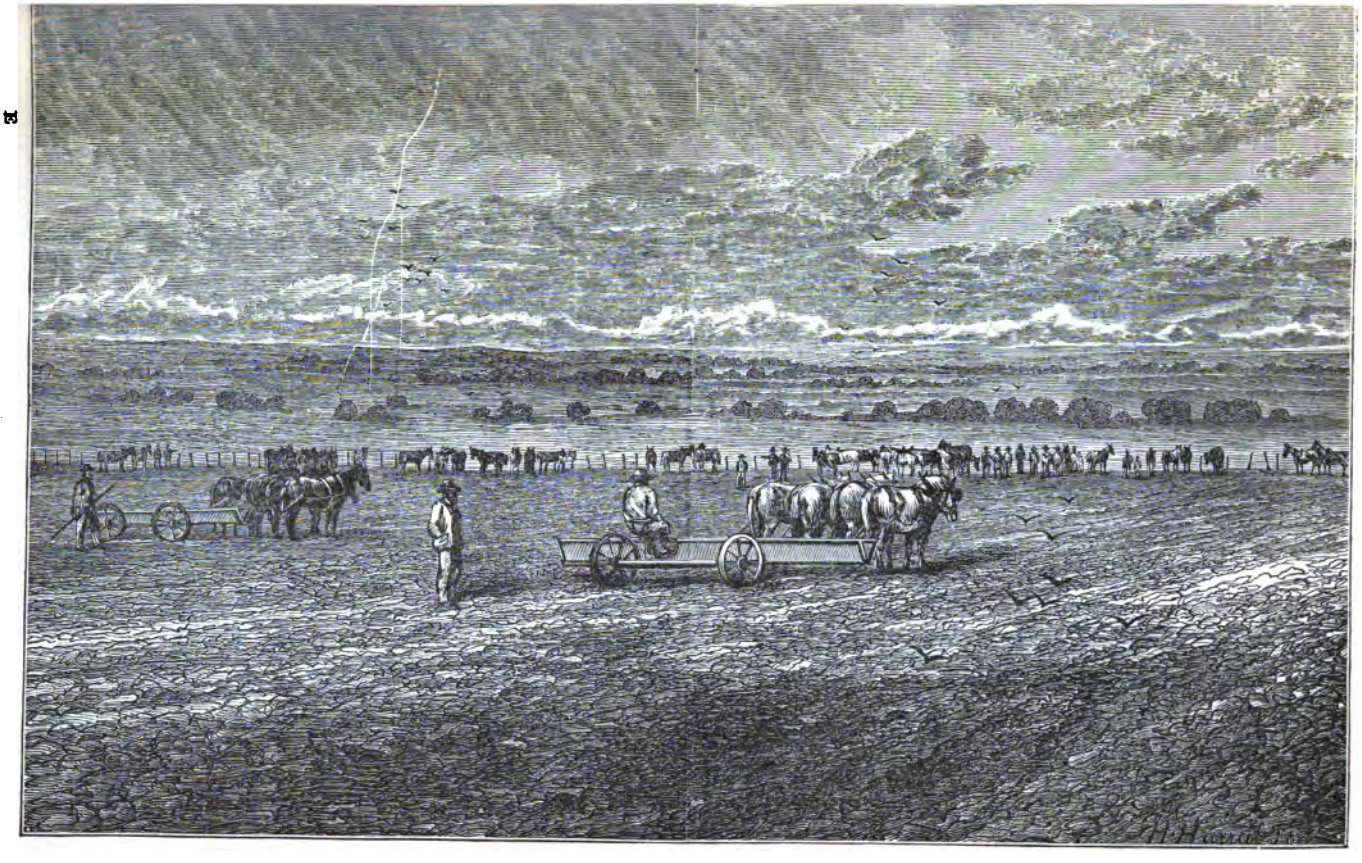
The honor of initiating the Adelaide University belongs to Mr. (now Sir) Walter Watson Hughes. In 1872, that gentleman munificently intimated his intention to give £20,000 to assist in founding a university, and thereupon a University Association was formed, and steps were taken to establish such an institution. On December 24th, 1872, Mr. Hughes executed a deed of gift, by which he set aside the above amount for the object stated, the income thereof to be applied in endowing two chairs or professorships in such university—one for classical and comparative philology and literature, and the other for English language and literature and mental and moral philosophy. Mr. Hughes at the same time nominated the Rev. Henry Read, M.A., of Mitcham (who has since resigned), and the late Rev. John

Davidson, of Chalmer's Church, Adelaide, as professors of classics and English literature respectively. In the year 1874, an Act of the Legislature was framed to establish, incorporate, and endow a University at Adelaide for the promotion of sound learning, and open to all classes and denominations. By this Statute the University was formally constituted, and provision is made for its government. A grant of land of five acres, on North-terrace, was made for the University buildings, together with a dedication of 50,000 acres of waste lands of the province for endowment purposes. In addition to these public gifts, it was enacted that the Government should pay an annual grant equal to five per cent. per annum on all endowments, provided that no such grant should exceed £10,000 in any one year. On November 6th, 1874, another munificent donation was made to the University by the Hon. (now Sir) Thomas Elder, who gave £20,000 for the general purposes of the University, and, in recognition of this liberality, the professors of mathematics are termed "Elder" professors. Several valuable scholarships are associated with the University, such as the following. The Department of Education offers three "University" scholarships, each of the value of £50 per annum, tenable for three years, which are annually awarded, on the recommendation of the Council of the University. The Department of Education also offers annually a scholarship of the value of £200 per annum, tenable for four years. This is called the "South Australian" scholarship, and the successful candidate must become a student of an approved European university. J. H. Angas, Esq., J.P., has founded an important scholarship, the object of which is to encourage the training of scientific men, and especially civil engineers, with a view to their settlement in South Australia. This is known as the "Angas" scholarship, is of the annual value of £200, and is tenable for three years. The scholar having passed through such special studies as may be prescribed, is required to proceed to the United Kingdom, and article himself to an approved civil engineer, or enter himself a student in an approved college or university, where he may prosecute such studies as shall qualify him to be a civil engineer, and upon his return to the colony (within five years of gaining the scholarship) in possession of such degree, diploma,

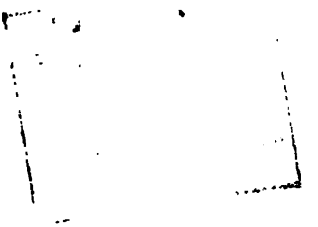
or certificate, as a civil engineer, as the Council shall approve, and upon writing to the satisfaction of the Council, a report of his proceedings and engineering works, he shall receive a further sum of £100 towards travelling expenses. The South Australian Commercial Travellers' Association scholarship, entitles the son or daughter of a member of the association (being a matriculated student of the university) who may be nominated by the association, to the advantages of the university, without payment of fees. The John Howard Clark memorial scholarships, devoted to English literature, are two in number, of the value of £30 each, and are tenable for two years. The University is also, by Royal letters patent, entitled to nominate, in each year, to one cadetship at the Royal Military College at Sandhurst. In addition to these honors there are also open to students prizes offered by Sir Thomas Elder of £20 annually for physiology, and three prizes, called the Stow prizes, of the value of £15 each, to the three scholars who shall have been respectively the most successful at the first, second, and third examinations in the third term for the degree of Bachelor of Laws. These prizes have been founded in memory of the late Randolph Isham Stow, formerly one of the Judges of the Supreme Court. The trustees of the Gilchrist scholarship offer annually a scholarship of the value of £100 per annum, tenable for three years, which is open to natives of the Australian colonies or persons who have resided therein for five years immediately preceding the examination between the age of sixteen and twenty-two years. Within the last year or two the scope of the operations of the University has been enlarged through the further munificence of wealthy colonists. By the gift of £10,000 generously made by Sir Thomas Elder the council has been enabled to found a Medical School, and Dr. Watson has been appointed "Elder" professor of anatomy. J. H. Angas, Esq., has also recently endowed a Chair of Chemistry by making a donation of £6,000 for this purpose, and Dr. Rennie, M.A., D. Sc., has been appointed "Angas" Professor of Chemistry. Owing to the active interest taken in the matter by His Excellency the Governor (Sir W. C. F. Robinson) a Chair of Music has also been established. His Excellency obtained promises of subscriptions amounting to £530 per annum for five years, and Mr. Joshua Ives, Mus. Bac., Cambridge, has been appointed Professor of Music.

It only remains to be said that in 1881, Royal letters patent were granted by Her Majesty the Queen, by which the degrees conferred by the Adelaide University on any person, male or female, are recognised as academic distinctions equal in rank to those granted by any University in the United Kingdom.

The above remarks will show that by the munificence of generous and wealthy colonists, South Australia is able to boast of an institution by which she can give to her sons and daughters the benefits of advanced education and admit them to the highest academic distinctions. The fact that since the establishment of the University 284 students have matriculated, and that there are now ninety undergraduates in various stages of their University studies, and a considerable number of students who are not working for a degree, bears testimony to the willingness and desire of the public to avail themselves of these superior educational advantages. It is a notable circumstance, too, that year by year the results of the education given in the public and private schools and colleges are being more largely tested by the matriculation examinations at the University—each year witnessing a large number of pupils from the lower seminaries who are desirous of attaining the honor of matriculation.



**Sowing.**



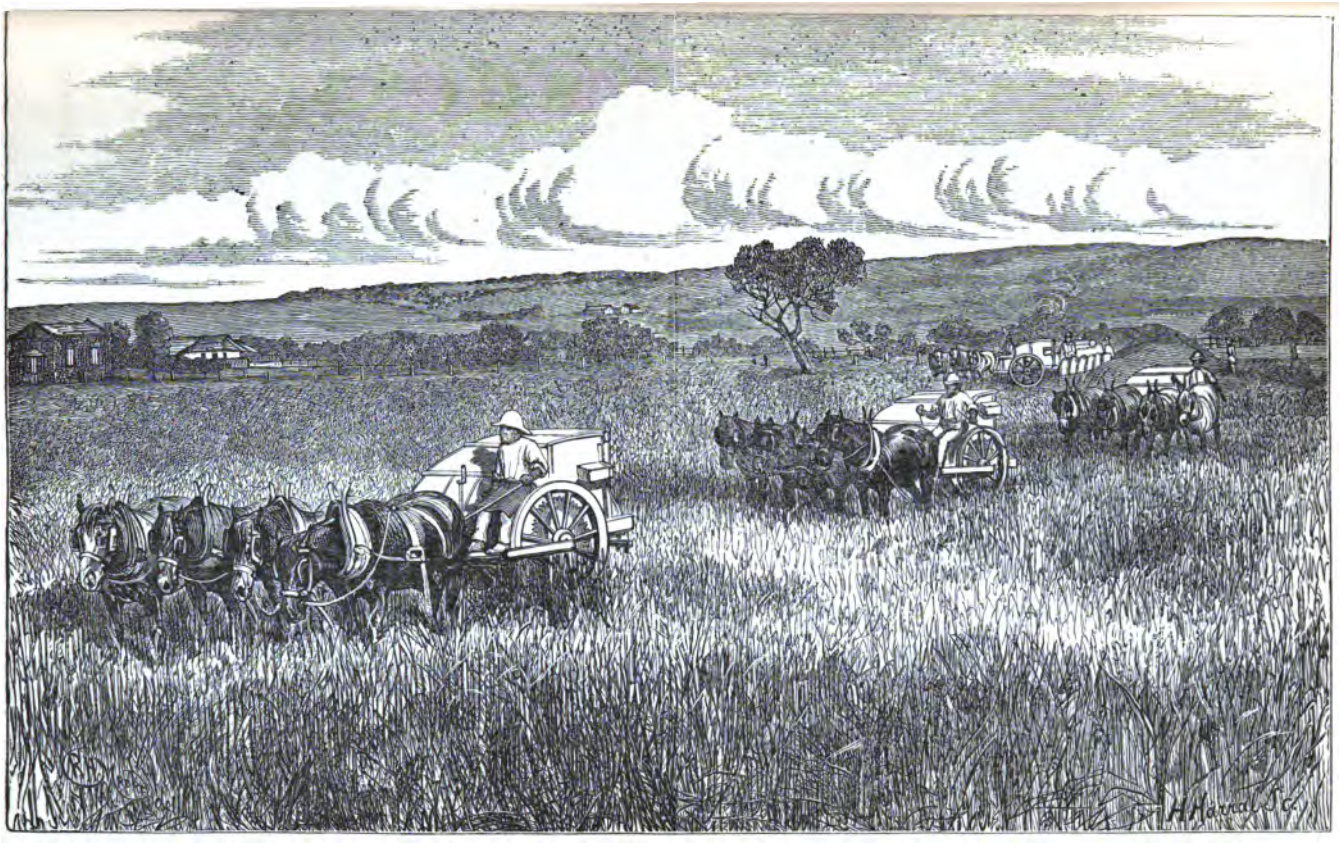
# *Chapter VIII.—THE INDUSTRIES OF THE PEOPLE.*

## I.—AGRICULTURE.

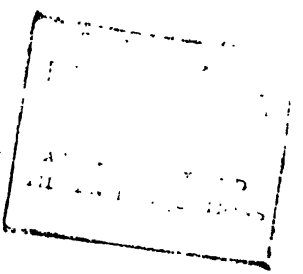
THE mode of farming in South Australia is very different from that pursued in Europe. It is no uncommon thing for a farmer in South Australia who never had anything to do with husbandry before, to take up 200 or 300 acres of land, and, with the help of one laborer, put the greater part of that under crop within a year. There are numbers of farmers who cultivate this quantity of land every year with no further help than that mentioned, except for a few weeks at harvest time. This will explain how it is that an average yield of six or seven bushels per acre pays expenses and yields a profit beside. In some cases at harvest time small farmers who cannot well afford to hire labor, or cannot secure men if they had the money to pay them, combine to mutually help each other—working together for one week at one farm and next week at the other farm until the crops of both are harvested. Other farm work, such as grubbing and clearing, is also occasionally done in the same way. In South Australian farmers, however, the British love of independence is so strongly developed that they strive as soon as possible to become freeholders; and to the industrious and thrifty man, this motive is a spur which seldom fails to lead him on to success. A number of the farms exceed 1,000 acres in extent, and a square mile—640 acres—is a common sized holding for a well-to-do farmer. The majority of these, it should be remembered, are men who have not been engaged in the work more than from ten to fifteen years. That period of honest work, with a fair amount of capital to start upon, has in very many cases sufficed to raise the South Australian farmer to a position of substantial prosperity. Of course, adverse circumstances sometimes retard progress, and the short average rainfall, and occasional seasons of extreme drought in some localities, at times cause much privation. It may fairly be said, however, that there are no farmers in any part of the world who, in less than fifty years, have gathered about them so much real comfort and substantial wealth as have the occupiers of the farming lands of this Province.

A visitor to the Colony in the months of October and November will, in his travels along the railways and main roads, be impressed with the extent of the waving fields of golden corn, which, in all directions—on the broad open plains, or on the undulating uplands, or nestling prettily in some quiet nook in the hill ranges—meet his eye. The corn quickly matures towards the end of November or beginning of December, and the rapidity with which—in the dry hot midsummer weather—the wheat ripens, taxes the fullest capacity of the farmer and his family and farm laborers in conducting effectively the harvest operations. In other countries the reaping is done by mowing the corn and allowing it to ripen in the stacks, but the rapid maturing of the wheat plant in South Australia when it has begun to ripen makes this style of harvesting unsuitable. Hand labor is too tedious and costly, and hence the profitable prosecution of wheat-growing in South Australia necessitates the employment of harvesting machines of a special character. The South Australian reaper, or "stripper," has attained most remarkable results in the rapid harvesting of corn. This machine, the manufacture of which forms an important industry in the Colony, takes the lead amongst the labor-saving appliances for harvesting. It has not only largely stimulated the cultivation of grain, but has enabled the farmer to reap crops which otherwise could not have been gathered, owing to the almost prohibitive cost of the hand-labor method of harvesting. Indeed, viewing its results upon agricultural operations in South Australia, it is impossible to over-estimate the value of the stripper. Formerly, the stripper could only be worked on dry hot days, when the wheat plant is brittle and the husks readily shed the corn. When the weather was damp, or a heavy dew lay on the crop, the stripper could not gather the corn successfully, and consequently, the farmer had to waste precious time at a critical season of the year. The stripper of to-day, however, embodies the improvements of a long and extensive experience, and may be therefore regarded as an invaluable harvesting machine in all countries whose climate is hot and dry, leading to a rapid maturing of the wheat, and necessitating a correspondingly speedy method of garnering it.

The agricultural year in South Australia begins immediately



**Reaping Corn with the Stripper.**



after the autumn months. In March or April, the early rains fall, and ploughing is very general during the three months of April, May, and June. The intense heat of summer hardens the ground so that ploughing is difficult and costly prior to the advent of the rains. Immediately, however, the first showers have fallen, the farmer commences ploughing, and the industrious agriculturist is busy with his teams from morning till night, breaking up the ground which he intends to put under crop. Sowing is begun in April, May, or June, according to the locality and, as a rule, is completed by July. In recent years, sowing has been done by mechanical seedsowers, which are largely manufactured in the Province. With this machine, 100 acres per day can be easily sown at a cost of about 3d. per acre. Drills, such as are used in English farming, are only adopted to a very limited extent. The operations of rolling and harrowing are very much the same as on English farms, only that the ground being drier and more friable requires less working. The principal rains fall in June and July; in August, as the days lengthen, the crops shoot up, and in the next two months they seem to grow like magic. As the month of November approaches, the crop begins to show for ear. The latter end of October and first week or two in November, is a critical time in the history of the wheat plant. In certain unfavorable seasons red rust develops and works deadly havoc in whole fields of wheat. Hay harvest is generally in full swing by the middle of November, the corn harvest following immediately afterwards—the forwardness of the crops depending upon varying circumstances, such as early or late varieties of wheat, early or late sowing, or favorable or unfavorable climatic conditions. Hay is made in South Australia of the wheat plant, mowed just as the wheat is forming in the ear, and dried for a few days in the sun. By the beginning of December, when the summer has set in, reaping operations have fairly commenced; and by Christmas, harvesting is general throughout the Colony. Wherever you go in the farming districts, you may see the stripper at work rapidly stripping the heads of the ripe corn, and hear the remarkable humming noise made by the rapid revolution of the beaters, which brush out the wheat from the growing crop.

The history of the invention of the stripper, so far as the Colony

is concerned, dates back about forty or forty-five years. In 1838-9, the first agricultural attempts were made when a small crop of twenty acres of wheat was grown on the present site of the City of Adelaide. In the next year this area had increased to 120 acres, and the following year to something over 1,000 acres; but the condition of the labor market at the time was such, that these pioneer farmers had to see much of their corn absolutely wasted from over-ripeness, through sheer inability to gather it by hand reaping. Hence, as in so many other instances where "necessity is the mother of invention," the inventive faculty was stimulated, and in a short time there was produced a machine which, though crude at first, was found to admirably suit its purpose, and in an improved form, is in general use throughout the country. It is estimated that over 10,000 of these machines have been made in the Colony, a fact which speaks of the estimation in which they are held by the farmer. Indeed, it is not too much to say, that it would be absolutely impossible for the produce of say, 2,000,000 acres to be harvested in the course of three or four weeks, with the ordinary man-power of the colony, unassisted by a rapid harvesting machine like the stripper. The honor of the invention has been claimed by several individuals, but it is generally considered, that the persons whose rival claims are most entitled to attention, are Mr. John Ridley (now resident in England), and Mr. J. W. Bull, of Adelaide. Some years ago, Mr. Ridley's services in giving the invention to the public, were recognised by the presentation of a handsome testimonial; and more recently the rival claims of Mr. Bull were recognised by Parliament, who voted a bonus to him. By the stripper, the cost of harvesting corn is reduced to a minimum. The cost of the machine ranges from £50 to £55. The average daily work is from eight to ten hours, and the area reaped per day may also be set down on an average of from eight to ten acres, according to circumstances. It is difficult to accurately state the cost of reaping, but it runs from 3s. to 5s. per acre.

In consequence of the stimulus given by the offer by the Government of a handsome bonus of £4,000 for a machine which would reap, clean, and bag wheat fit for market, considerable attention has been paid to the perfecting of a combined harvester,

Reaping, Gawler Plains, South Australia (the end of the field where the machines are emptied).

but success has not yet been achieved in this direction. The cleaning process has been considerably simplified, but the machine which takes the corn from the wheat plant and delivers it from the machine fit for market, has yet to be brought out. In the meantime, a winnower is, of course, a companion machine of the stripper. Probably some 10,000 of these have also been made here; and the manufacture of winnowers is an important branch of industry. The cost of winnowing and bagging the wheat—"cleaning up," as it is termed—is about 2d. or 2½d. per bushel. The machine itself costs from £20 to £25, and is easily worked by two men who can clean up from 200 to 300 bushels per day of nine hours. By these two machines—the stripper and winnower—the South Australian is enabled to gather in the wheat crop of an exceptionally high ratio of lands under tillage.

### Scrub Lands Cultivation.

Most of the land which has been cultivated in South Australia in the past, has consisted of open plains or slopes, lightly covered with timber. These have been cleared at a cost of from £1 to £5 per acre, and the timber has, for the most part, been burned. Of late years, however, a large area of what are called "scrub lands" have been brought into requisition by the invention of appliances which efficiently and economically clear the ground of the light timber upon it. The first sales of these scrub lands took place in 1867, since which time the selection and occupation of scrub lands have continually increased; the work having been made much more profitable through the invention and adoption of what is known as the "stump-jumping" plough and kindred implements. These implements are so constructed as to enable them to work over small stumps which have been left in the ground. From a valuable paper read by the Hon. R. D. Ross, Speaker of the House of Assembly, before the Royal Agricultural and Horticultural Society, in Adelaide, it appears that the invention of the stump-jumping ploughs ranks next to Ridley's stripper. Its inventor, Mr. Richard Bowyer Smith, did not patent his invention, which therefore became public property. Many improvements have been effected from time to time in the machines, which are now made in large numbers. In some instances where the scrub timber is small,

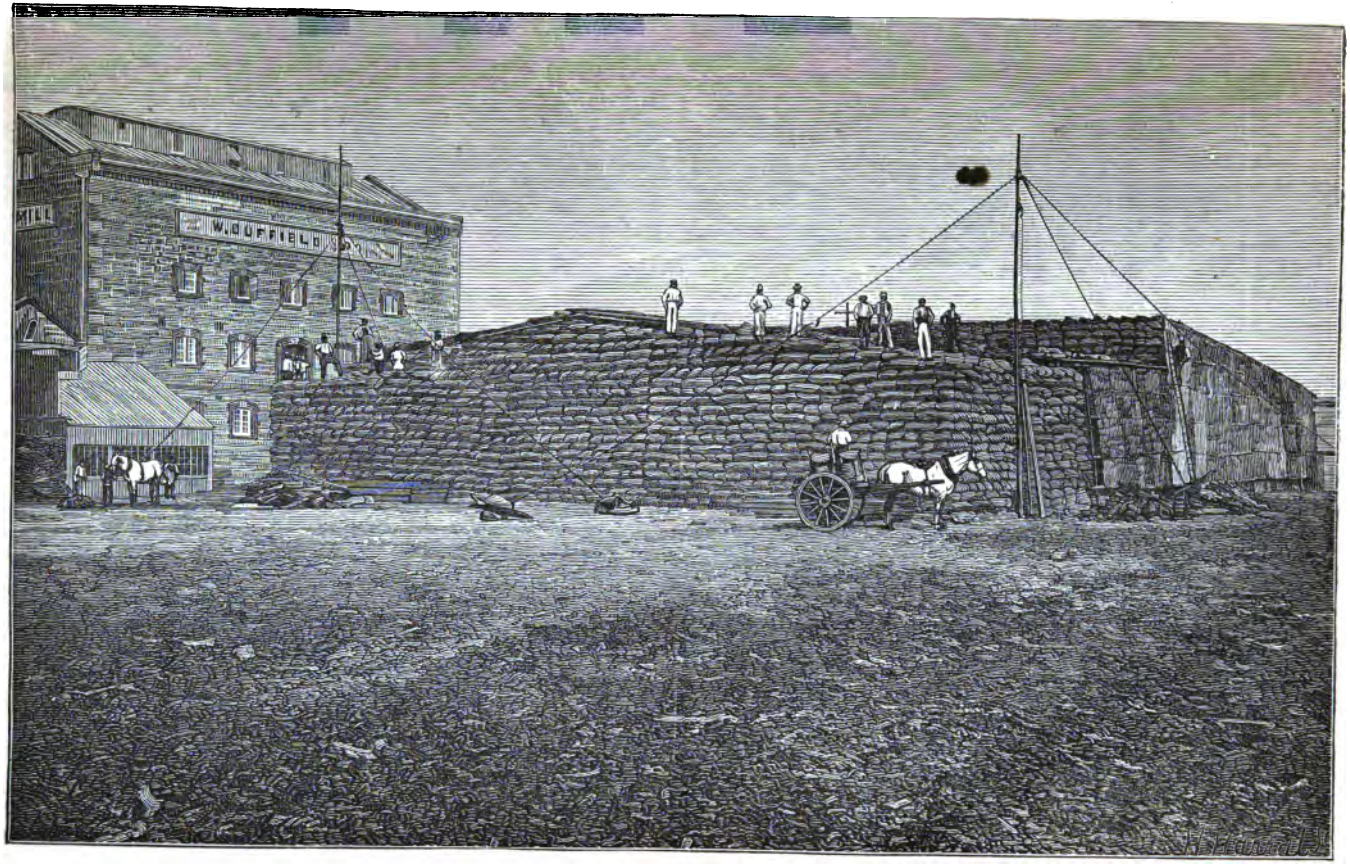
varying from 1in. to 3in. in diameter, the scrub is rolled down by a heavy roller and then burned, instead of being cut down by axes and destroyed by fire or sold for firewood. Large quantities are brought by rail to the city and so disposed of. These rollers are made either of wood or iron, and three horses or six bullocks can roll down from five to ten acres per day, according to the size of the scrub, at a cost of from 8s. to 12s. per acre. This system is called "Mullenizing." After the scrub is rolled down and burned, a good stump-jumping plough will do as good work as an ordinary plough in ordinary ground—the only difference being, that the furrows are not so straight. Whenever the plough comes against a stump, the obstruction causes the plough to lift until it slides over the stump and takes the ground again on the other side. Where the scrub is heavy it is necessary to do some of the clearing by axes; and some very effective and cheap grubbing machines for taking hold of stumps and wrenching them out of the ground, have been invented and made.

The inventor of the stump-jumping plough, Mr. Richard Bowyer Smith, has been rewarded by Parliament with a grant of land, in consideration of the value of his discovery. It is essentially a South Australian invention, although, no doubt, it will be of great use in many other parts of the world. By means of it scrub lands have of late years been rapidly and cheaply brought under cultivation; and thus, an enhanced value given to an immense area of the public estate. Mr. John Scoble, and some other colonists, have assisted by various improvements in the realization of the above results, the importance of which will be understood when it is borne in mind that one-third of the whole area of South Australia proper consists of scrub lands; and that these are chiefly situated within 100 miles of the long coast line running from the Victorian boundary to the point at which South Australia abuts on Western Australia.

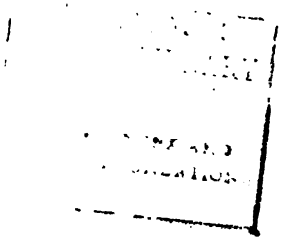
## II.—HORTICULTURE.

By Mr. A. Molineux, Editor of *The Garden and the Field.*

The soil and climate of South Australia are admirably suitable for the production of the fruits, flowers, and vegetables of all the



Victoria Mill, Gawler.



temperate and some of the extra-tropical regions of the earth. There is an almost unlimited area of alluvial soil throughout the settled portion of the colony, and very little stone to interfere with cultural operations. This remark applies especially to the plains, which are very extensive, and here the soil is chiefly an alluvium resting upon a permeable ferruginous clay, with, in most cases, a calcareous subsoil beneath. The depth of alluvium is very considerable, and generally upon the plains rock is not met with until hundreds of feet have been passed through. In some places, such as Yorke's Peninsula and in the mallee country (country thickly covered with dwarf eucalypts, brushwood, &c.), the soil may consist of humus, sand, light soil, resting upon limestone slabs upon a calcareous rubble, but even this is very fertile, and all kinds of horticultural produce can be raised upon it. The mountain ranges where the declivities run steep are stony, but generally there is very little of this character of country, and the slopes of the hills as well as the valleys and gullies are splendidly adapted for all kinds of horticultural pursuits. Taking the Mount Lofty Range, for example, the highest peak (Mount Lofty), distant about fifteen miles from the shores of St. Vincent's Gulf and eight miles to the eastward of Adelaide, is only 2,234ft. above sea level. The gardens and orchards which supply the City of Adelaide are considerably below this summit, but here every kind of fruit that can be grown in England is found, as well as olives, figs, oranges, peaches, guavas, grapes, &c., growing in the open air, and thriving most luxuriantly. There are no forcing houses used, and the only fruits that the writer has ever known to have been raised under glass were a few pineapples, which are purely tropical products. Even the plants of these lived in the open air through last winter in a garden at Felixstow, on the plains, belonging to Mr. Pitt. The temperature has never been known to fall so low as 30° Fah. upon the plains, and ice is only known in the shape of hoar frost, except when water is exposed in very shallow vessels on a frosty night. Once in a few years there may be a slight fall of snow, which lasts upon the ground for an hour or two; but this is so rare an occurrence that whenever it happens the market gardeners roll up a ball and bring it into the city as a curiosity.

Probably there is no city in the world that is better supplied with horticultural products than is Adelaide. The following list will give only a faint idea of the profusion of fruit that can be grown, and it must be remarked that of each of these there are a great many varieties:—Almonds, apples, apricots, blackberries, brinjals (or egg fruits), Cape gooseberries, cherries, chestnuts, citrons, currants, damsons, figs, filberts, &c., gooseberries, guavas, grapes, limes, loquats, medlars, melons (water melons and sweet melons) of all sorts, mulberries, nectarines, olives, oranges, peaches, pears, plums, pomegranates, quinces, raspberries, shaddocks, strawberries, tomatoes, walnuts, and others.

Of apples, it is supposed that fully 500 sorts could be got together. Many of these are seedlings, but a number of them are of little value through not being named and being only of ordinary merit. Probably fifty to sixty varieties would comprise the great bulk of the sorts that are chiefly cultivated, and of these, again, about twenty are largely grown for market and for export. There are about 600 market gardeners within a few miles of Adelaide who gain their living by growing fruit and vegetables, and there are a great many besides owning small gardens from which they sell the produce; but as these persons do not depend entirely upon horticulture for a living they cannot be classed as market gardeners. The market gardens range from three or four acres in the rich peaty bottoms of gullies, up to thirty and even fifty acres. These larger gardens are generally devoted more to fruit growing, and often have a small grazing paddock attached for the horses. Some of the largest producers of apples are Mr. Pugh, of Balhannah; Hon. R. D. Ross, Highercombe; Mr. Charles Giles, Norton's Summit; Messrs. Hannaford, Teakle, Bowden, and Penna, of Gumeracha, some of whom can send in from 400 to 600 bushels of apples per week during the season. Of oranges, Mr. Finden, of Salisbury, Mr. Pitt, of Findon, Messrs. Beazley, Ind, Hart, and others of Paradise, and Mr. Curnow, of Montacute, are the largest growers. The Government statistics of 1883 show that, in South Australia, there are 5,172 acres cultivated as gardens and 6,556 acres under orchards. This is exclusive of vineyards, of which 4,280 acres exist with 3,506,244 vines now in bearing. Our vineyards decreased very seriously

through the unsaleable character of the wines made at first; but since experts in wine making were introduced, our wines have become valuable in the markets of the world, and, as a consequence, the area under vines is increasing. Almonds are grown more for ornament than for their fruit, but we have about 102,000 trees in bearing, and they yield very good crops, and the extensive cultivation of the almond on the Adelaide plains is being warmly advocated. The last statistics gave only 1,613 cwts. as having been gathered in one year from all of those trees, though a single large tree has been known to give a hundredweight of nuts in a season. The olive also grows well, and it is estimated that from 4,000 to 5,000 gallons of oil are produced annually. As much as 1cwt. of berries has been gathered from a single tree, but of course this yield is exceptional, and must not be mentioned as an average. In the same way, there have been single bunches of grapes up to 14½lbs. and even 17½lbs. exhibited here, but bunches of 7lbs. to 8lbs. are not uncommon at our horticultural shows, whilst 3lbs. to 4lbs. bunches are regularly seen in our shops. Until the establishment of jam factories and fruit preserving works it was a common thing to see peaches, apricots, and apples, carried in cartloads to the pigsties; but the preserving works, as well as the introduction of a few garden pests, have reduced the superfluity of fruit, so that growers can now obtain fairly remunerative prices for their produce. Grapes that were once a farthing per pound now sell at retail for as much as twopence to fourpence; apples one penny to three-halfpence; plums, quinces, and pears can generally be purchased during the season retail at about 4s. per bushel, or lower. Some of the tender fruits—such as raspberries, currants, cherries, and strawberries—are seldom cheaper than 3½d. per lb., and often run up to 6d. per lb.

The fruits mentioned are the common fruits of the shops, and can be purchased in bulk, if wanted; but there are several others, such as grenadillas, bananas, pine apples, &c., that require too much care to be profitable, and are therefore only grown for fancy or amusement.

With a view to show how well suited some localities in the Mount Lofty Ranges are for the production of a varied assortment of fruit and vegetables, it will be of interest to give some par-

ticulars of one of the oldest and most notable orchards here. "Highercombe," the estate of the Hon. R. D. Ross, Speaker, is noted not only for its vineyard, but for its extensive orchard, which contains many thousands of apple and pear trees of the best known varieties, also cherries, plums, damsons, apricots, nectarines, peaches, quinces, almonds, berberries, blackberries, mulberries, medlars, currants (red, black, and white), figs, gooseberries, thousands of Spanish chestnuts, walnuts, hazels, filberts, Barcelona and cobb nuts, and also stone pines, raspberries, acres of strawberries, oranges, lemons, citrons, shaddocks, cumquats, olives, Zante currants, sultana and other table grapes, guavas, loquats, persimmons, and other fruits, in a wealth and profusion to be found in no other single orchard in Australia. The beneficence of the climate of South Australia in the Mount Lofty Ranges is well exemplified in Mr. Ross's extensive grounds where a scheme of acclimatization in useful and ornamental plants has been carried out with much energy, enterprise, and practical ability, to say nothing of cost. In the ornamental plantations are to be found nearly all the best known European trees and shrubs, represented by hundreds of oaks of many varieties, ashes, limes, elms, sycamores, larches, horse chestnuts, birch, evergreen oaks, beech, yew, willow, osiers, poplars, laburnums, lilacs, camellias, thorns (cratægus), hollies, laurels, in a richness and abundance of varieties that is really surprising. Box, myrtle, junipers, brooms, cystus, cedar, magnolias, pomegranate, musk tree, camphor laurel, gravillias, screw pines, pyrus japonica, oleanders, and osage orange, cedrus deodara, Kaffre thorn, privet, bay trees, aloes, arbutus, cypress pines, firs, Norfolk Island pines, and araucarias in great number and varieties, and other plants and shrubs too numerous to mention. There is a splendid specimen of the *Cedrus deodara* growing in Mr. Ross's plantation on which H.R.H. the Duke of Edinburgh, when in this colony in 1868, carved his initial "A." Besides orchard, vineyard, and ornamental plantations, Mr. Ross has many acres of a well-kept kitchen garden, in which every known English vegetable in ordinary use is grown in perfection. It may be added that Mr. Ross had presented to him by H.R.H. the Duke of Edinburgh, in 1867, a gold medal awarded

by the Royal Agricultural and Horticultural Society of South Australia "to the person on whose grounds were to be found the "greatest number and varieties of acclimatized plants."

It may confidently be asserted that Highercombe to this day carries off the palm in this respect, not only in South Australia, but in Australasia. Mr. Ross is largely indebted for this extensive and varied collection of trees and shrubs to Mr. G. F. Anstey, the original owner of Highercombe. Latterly Mr. Ross has utilised some of the many excellent cider apples growing in his orchard in making a sparkling cider, which is considered quite equal if not superior to the best cider of that description made in any part of the world. Mr. Ross claims the credit of having been the first person in Australia who has succeeded in making a really superior quality of sparkling cider. He has sent a sample to the Colonial and Indian Exhibition for the report of the judges. This partial enumeration of the fruits, vegetables, trees, plants, and shrubs growing on the Highercombe estate evidences the abundant wealth of production which is, so to say, lying dormant in the extensive uncultivated lands comprised in the tract of country broadly described as the Mount Lofty Ranges. There are thousands of acres in the Highercombe district (part of the Mount Lofty Ranges) enjoying an annual rainfall equal to that of the west coast of England which are now almost in a state of nature, but which can be converted into luxuriant homesteads and wealth-producing vineyards, orchards, and gardens. All that is needed is the application in an intelligent way of skill, labor, and capital.

The late Mr. George Stevenson's garden ("Leawood"), near Mount Lofty, also contains a very large and varied stock of trees and plants from all parts of the world.

The common garden vegetables of the country comprise:—Artichoke, asparagus, beets, beans (broad, French, and running), broccoli, Brussels sprouts, cabbages, cardoons, capers, capsicums, carrots, cauliflowers, celery, chervil, cress, cucumber, egg plant, endive, herbs of all kinds, and salads of every sort, Jerusalem artichoke, kohlrabi, kale, leeks, lettuces, melons (water, sweet, pie), maize, mustard, onions, okra, orach, parsley, parsnips, potatoes, peas, pumpkins, rape, radishes, rampion, rhubarb, salsafy,

scorzonera, spinach, squash, swedes, tomatoes, trombone, turnips, vegetable marrows, &c.

The main crops of potatoes are grown in the neighborhood of Mount Gambier, in the south-eastern district of the colony, about 200 miles from Adelaide, where also there are a few hop plantations. The volcanic soil of that locality and the rather more abundant rainfall make the vicinity of Mount Gambier very suitable for these two products, as well as for meadow and dairy farming generally. There is also an extensive scope for the same pursuits upon the drained lands of Millicent, Mayurra, &c., in that quarter of the colony. The area under potatoes in 1883 was 6,063 acres, and the yields are very heavy. In the Mount Lofty Ranges, potatoes are grown regularly along with the other crops of vegetables, but no large cultivation is conducted. Upon the plains the culture is too uncertain, though sometimes a few acres will turn out well. The uncertainty is mostly due to want of rain at the proper time, and no general or public system of irrigation has hitherto been adopted, beyond the use of "wind-engines" for pumping water, of which a good many are used in orchards and gardens where the water is not deep down. The necessity of better appliances for irrigation is, however, now fully recognised by horticulturists, who are employing steam power for water raising.

Monstrous growths in culinary vegetables are by no means uncommon in the shops of Adelaide. Pumpkins up to 150lbs. each, and many over 100lbs., have been shown. A radish of the long red variety was shown in September weighing 35lbs.; cauliflowers up to 40lbs. may sometimes be seen, and monstrous mangolds, swedes, kohlrabi, &c., are not at all rare. The average weights, however, are much the same as would obtain in England. Thus, cabbages run generally from 4lbs. to 8lbs. each, and the greengrocers like to get two dozen into a four bushel bag, for sending per rail to the interior, each bag weighing 1½cwt. Nearly all the country trade in horticultural produce is conducted by middlemen, who purchase the produce wholesale from the growers, and then pack it up and send it by steamer and by rail to most distant parts—400 and 500 miles away. Within the past year or two, however, certain persons in distant localities as well

Botanic Garden—The Lake.

as upon the near Yorke's Peninsula have been trying experiments in horticulture, and have been rewarded with the most unqualified success. At a place near Stansbury, strawberries have been produced in October—a fortnight before any were ready in Adelaide. All kinds of fruits, vegetables, and flowers also grow well in this and a number of other gardens all down the Peninsula, from Wallaroo southwards. At Quorn, about 206 miles north of Adelaide, there are fruit and vegetable gardens, and last year some peaches and grapes of a superior quality were sent down to Adelaide from a place 150 miles west of Port Augusta.

But perhaps a better idea of the elasticity of our resources in horticultural products can be obtained by a study of our efforts in floriculture, and by taking Mr. Henry Sewell's "General Descriptive Catalogue of Plants" as a guide. He publishes 114 solid pages, without illustrations, of plants sold by him—over 10,000 varieties. There are besides about a dozen other nurserymen each in a large way of business. Amongst the ranges to the east of Adelaide may be found growing in the open air Cape heaths (ericas), camellias, primulas, azaleas, pansies, rhododendrons, hollies, hawthorns, oaks, elms; pines from Scotland, America, New Zealand, from hot climates and cold regions; dahlias, hollyhocks, carnations, lilies of all sorts, from the hardy *lilium candidum* to *L. auratum*; hyacinths, tulips (sparaxes cover acres, and in some places have taken possession of the land); hibiscus species; fuchsias, daphnes, gardenias, palms, oleander, roses (hundreds of varieties); magnolias from extra-tropical America; leucodendrons from the Cape of Good Hope; chrysanthemums from Japan and China; silver pines from the Crimea *(picea nordmanniana)*; junipers from Bermuda; *Cedrus deodara* from India; sequoias from the Sierra Nevada mountains; chesnuts from Spain, and so on.

Coming down on to the plains, where the elevation is perhaps not more than 200ft. to 300ft. above the sea, and where the winds from the north come over very long distances without a break, it is hardly possible to grow camellias, ericas, and similar plants that can be affected by hot drying winds, except under what are termed "shade houses," which are structures made with lath roofs, having a space of about an inch between each lath. The rays of the sun in passing over do not rest for any time upon the foliage. In such

houses, lily of the valley, dielytras, primulas, &c., can be grown easily, as well as many other heat-affected plants. Still, there is a great scope for floriculture upon the plains, and over 100 species of plants have been found in bloom during December in the Botanic Gardens, although that month is about the worst time of the year for flowers upon the plains.

The practice of gardening is almost universal in South Australia. Even in the most desolate and arid districts, the few shepherds and others try to grow some kinds of plants—marigolds, stocks, or even cabbages or other vegetables. At the hotels, the balconies or the upper windows or yards are occupied with plants; small gardens or pot plants may also be seen at the gaols, hospitals, telegraph and railway stations, courts of law, &c.; indeed, the legislator, the merchant, the policeman, the cabman, everybody seems as if he must have some sort of a garden attached to his residence; but a great many people in the end get tired of horticulture as a pursuit, and the gardens are utterly neglected. In the suburbs of Adelaide, however, there are many well kept and well stocked gardens, where hundreds of kinds of plants are cultivated. Some of the pleasure gardens around the city are of considerable extent, and to do justice to a few of them, in inspecting all that is worth inspection, would require the best part of a day for each one. Take Sir Thomas Elder's, for instance, where about a dozen gardeners are kept; or Mr. R. Barr Smith's; or Hon. Henry Scott's; or Mr. G. S. Fowler's; or Mr. J. S. Sander's; or Mr. Boothby's; or Hon. G. C. Hawker's; or Chief Justice Way's; or Mr. E. T. Smith's. Of gardens from two or three acres down to half an acre there are a great number—making it a most pleasant pastime to stroll along the streets of a suburb on a quiet day. At one time the chief attraction will be beds of chrysanthemums; at another the roses will be in bloom; at another the pansies, the antirrhinums, or the pentstemons, or the bouvardias. All the year there are the single and double zonale pelargoniums (geraniums) in bloom, and as a rule one can count upon having 75 to 100 sorts of flowers in his garden at once if care is taken to sow or plant at the right time. There is no trouble with frost, and with a little care in watering there is no danger from excessive heat.

The climate and soil are generally so well adapted for horticulture

that there is no necessity to use forcing pits and hot houses. There are only a very few fruits that cannot be grown in the open air quite easily, and the rest—the exceedingly delicate kinds, the pineapples, bananas, &c.—can be imported from Queensland as they are wanted. A few enterprising colonists have grown bananas in the open air within the City of Adelaide, and regularly every year the fruit has been produced and used; but the quantity is always disproportioned to the trouble, and the flavor is not so tempting as to induce cultivators to extend their operations.

## III.—WINE GROWING.

The suitability of the climate and soil of South Australia to the cultivation of the vine is admitted, and the steady strides of development of the wine industry bear testimony to this fact. Without doubt the country is adapted to the production of all sorts of wine, there being localities and altitudes with soils and climate equal to those possessed by the best vineyards in the world. The Adelaide plains produce wines similar to those of the south of Spain, whereas the hilly districts are adapted to the growth of clarets and the lighter descriptions of wine. Consequently, the wines of South Australia have a great range in style and character—from the light Riesling and Shiraz, resembling the wines of the north of France and Germany, to the full-bodied and heavy ports and sherries of Spain and Portugal. As far as present experience has shown, the colony seems more suited for the production of full-bodied generous wines than for the lighter varieties. Experience has also taught the vigneron that a large preliminary expense in trenching the vineyards is unnecessary. Previously this used to be done at considerable cost, now the vigneron simply ploughs his land and plants his vines, thus materially reducing the cost of production. It has also been clearly shown, that the wornout wheat lands are well suited to the cultivation of the vine. In some cases land which had been exhausted by continual cropping with wheat has been put under vines with the most satisfactory results. The aggregate annual vintage may be set down at say, 600,000 gallons, a quantity which is yearly increasing, and the new vineyards that are being planted promise still larger supplies in the future.

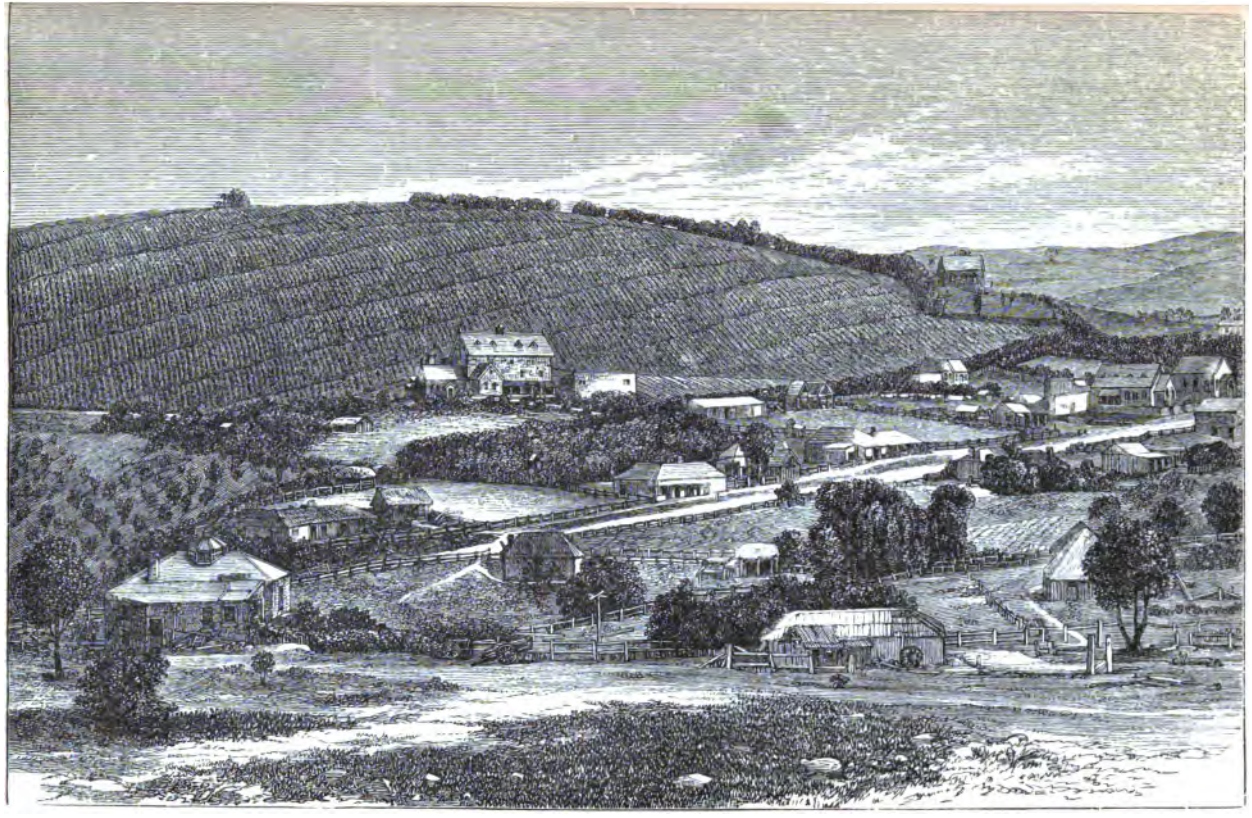
The honor of being the pioneer winegrower of South Australia belongs to the late Mr. John Reynell. His vineyard, about twelve miles south of Adelaide, was planted in the year 1840, and by the year 1852 there were 282 acres of vineyard. From that date to 1860 there was considerable impetus given to winegrowing, principally by the writings of Sir William Macarthur, of New South Wales, who also did so much for Australia generally by introducing the merino sheep, which form now the characteristic sheep of Australasia. Sir William's letters in the newspapers written with the signature "Maro," attracted public attention to the importance of the culture of the vine. Dr. Kelly also, about the same time, gave confidence in the industry by his enterprising example in the southern district, so that by the year 1859 there were 2,200 acres under vines. Dr. Kelly himself planted a small vineyard in 1849, at a place called Trinity, at Morphett Vale; but in 1863 he commenced the Tintara Vineyard, at Maclaren Vale, which was one of the largest concerns started at that time. The extension of vine planting went on steadily until the year 1866, when the vineyards represented an area of 6,629 acres. The production of wine, also, went on increasing, so that in the year 1870, there were as many as 895,000 gallons made. About this time a somewhat serious depression settled down upon the wine industry. The production rapidly overtook the demand, and a great number of people who had planted small vineyards but had not sufficient knowledge and experience to make good wine, became discouraged and disheartened. The consequence was, that a great many of the older vineyards were uprooted, until in 1879 there were only 4,114 acres of vines, and the production of wine had, in 1881, fallen to 313,000 gallons. Since that time, however, the industry has had a fresh start owing to the higher appreciation—both in and out of the colony—of the native wines, and also to the more satisfactory manner in which the business has been conducted. During the past three years orders for large parcels of wine (from 10,000 to 20,000 gallons in a lot) have been received from Messrs. P. B. Burgoyne & Co., of London, by some of the principal producers here, and this fact has greatly helped to give confidence in the future prospects of the business. Instead of the owners of small vineyards making their own wine, and placing these upon the

market in small quantities, and perhaps of inferior quality, they now dispose of their grapes to the larger vignerons, by whom the wine is made, stored, and blended, and prepared for market. This fact has already done a great deal, and is calculated to do still more to develop the wine industry, and to improve the quality of the wines produced, and ensure a full and regular supply of characteristic types of wine. During the last three years there has been a very considerable advance made in vine planting, especially in the neighborhood of Angaston. It is estimated that during the present year no less an area than 1,000 acres will have been planted with vines in that neighborhood alone.

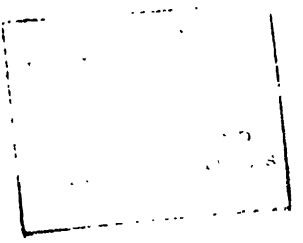
The latest statistics available—those for the year 1884—show that there are 4,590 acres under vines, which yield 473,535 gallons of wine. As just stated, however, the planting of vines is being extended every year, so that these figures will not represent either the area of vineyard or the quantity of wine produced at the present time.

It will doubtless be of interest to give a few particulars respecting the more important vineyards in the province, taking those first that are situate south of Adelaide. Some four miles from the city is Mr. A. Weaver's vineyard, comprising about twelve acres. This was planted thirty years ago with nearly all the then known varieties of the grape in the colony. This vineyard yields a moderate crop, but it suffers in dry seasons from a saltish subsoil, which is deleterious to the quality of the wine—a remark which applies to nearly all the vineyards in this neighborhood. About a mile further south is the vineyard of the late Mr. B. H. Babbage, containing about twenty-five acres of various kinds of vines, and yielding from 4,000 to 5,000 gallons of wine annually. Near by, is a vineyard of twelve acres, planted also about thirty years ago by the late Captain O'Halloran, and two miles westwards is Oaklands, the property of Hon. J. Crozier, M.L.C., where on the rich alluvial soil, on the banks of the Sturt creek, a vineyard is planted with good varieties. This vineyard has been known to produce 2,000 gallons of wine per acre, when the vines were in their youthful luxuriance; but the yield from them has fallen off to less than 300 gallons per acre. Further south, at the foot of the hills, is a small plot of vines, five acres in extent, all that is

left of a large vineyard, which was planted over thirty years ago by the late Mr. W. H. Trimmer. This is planted with *Pedro Ximenes* grape, and has for many years yielded from five to six tons of fine grapes to the acre, which, at the price paid—£5 or £6 per ton—is a handsome return. Near the coast, at Marino, on the high and dry limestone land, a large vineyard was planted by the late Sir G. S. Kingston, with the best Spanish varieties of grapes, both white and red; but owing to the dryness of the situation, wine-making here was never a success, and the vineyard has consequently been abandoned. Over the first range of hills, and about eleven miles from Adelaide, Mr. H. Douglas has forty acres of vineyard, which were planted thirty years ago with the best varieties of wine grapes. The land is some of the richest for wine-growing, and yields annually from 8,000 to 9,000 gallons. In the next valley, further south, is the vineyard of Mr. W. Reynell, which is principally planted with *Carbinet Sauvignon*, in rich black soil. In good seasons a very full-bodied wine is made here, but the vineyard is subject to spring frosts, which sometimes destroy a large portion of the crop. This vineyard possesses special interest, as being the first in the province which was planted with wine grapes by the late Mr. John Reynell, the father of the present proprietor, who obtained these vines from New South Wales, whither they had been brought principally by Mr. James Busby, who collected them at his own expense in Europe in 1830. Mr. Reynell may therefore be regarded as the pioneer of wine-growing in South Australia. The original vineyard, which was planted nearly forty-five years ago on higher and poorer land, has long since been abandoned, the yield having become too small to pay for cultivation. To the east of this, on the banks of the Onkaparinga river at Clarendon, is one of the most picturesque vineyards in Australia. This was planted about forty years ago, and is still in good preservation, although the yield has greatly fallen off—from 11,000 to 12,000 gallons annually to a little more than half that quantity. This vineyard is thirty-eight acres in extent, and is now the property of Mr. Joseph Gillard, one of the oldest and most successful South Australian wine-growers. The vineyard was originally planted by a company, with vines imported direct from Spain. The varieties are principally *Palomino Blanco* for



**Vineyard at Clarendon.**



white and *Grenache* for red wines. The wines from this vineyard are light and delicate, and among the best grown in the colony. At Morphett Vale, eighteen miles from Adelaide, are many small vineyards. In this neighborhood Dr. Kelly commenced to plant on land which proved to be too dry and unsuitable, so that his vineyard had to be abandoned. Dr. Kelly then removed to Tintara, about ten miles further south, and in association with several wealthy colonists planted a vineyard nearly 100 acres in extent on ironstone ground, situated picturesquely amongst the hills. Dr. Kelly gave much attention to the cultivation of the vine, and was the author of several good works on viticulture. The Tintara vineyard was purchased in 1878 by Mr. Thomas Hardy, who has added about fifty acres to it, and has also about 200 acres of vines in the same neighbourhood, in addition to which he purchases the grapes from all the small growers for several miles round. Near Tintara is a vineyard of thirty acres, belonging to Messrs. Manning Brothers, which is principally planted with *Shiraz*, *Carbinet*, and *Grenache*. This is first-rate vine land, having fine rich red loam and a subsoil of soft lime with plenty of ironstone on the tops of the hills. There is a large extent of country of this description in the neighborhood. It has been proved to be the best for red wines, giving a deep color and great body, and making them valuable wines for blending purposes. A portion of this vineyard was planted on land which had had twelve successive crops of wheat taken off, a fact which affords ample proof that land which is exhausted by wheat-growing is almost, if not quite, as suitable for vines as virgin land. Mr. Oliver's vineyard of twenty acres is in the same neighborhood. It may here be mentioned that land in this locality may be purchased at from £3 to £10 per acre, according to position and quality of the land.

Eastwards from Adelaide the first vineyards of any size are at or near Glen Osmond at the foot of the Mount Lofty Range. The Rosefield Vineyard was planted by the late Mr. George White. It is about twenty-five acres in extent and is planted with the best varieties both of red and white grapes. Sir Thomas Elder has a vineyard of seventeen acres, beautifully situated at Glen Osmond, and known as "Birksgate." It is planted with the best varieties of vines. Near this is a thirteen-acre vineyard, planted by the late

Mr. Osmond Gilles, overlooking the city. It is planted with good varieties, and yields about twenty tons of grapes annually. More to the eastward, and still on the foot hills of Mount Lofty, is "Sunnyside," the property of Sir William Milne, about twenty acres in extent. Near "Sunnyside" are the vineyards of Sir Samuel Davenport, altogether about twenty-five acres in extent, a large proportion of which are planted with the *Sercial* grape from the Island of Madeira, and the wine made is of the Madeira type. The cellars, although not large, are a model of neatness and careful management, and Sir Samuel has done as much as anyone by precept and example to promote the wine industry in the province. Still further eastwards are the Magill vineyards, the first reached being that of Mr. E. W. Wright, consisting of about twenty-five acres, and planted with *Muscatel* vines, and originally intended for raisin-making, but of late years used for wine. At a little distance from this and higher up the foot hills is the Grange vineyard—Messrs. Penfold & Co. proprietors. In 1875 this vineyard was about sixty acres in extent, but since then considerable additions have been made. The cellarage here is very extensive, and large quantities of grapes are bought annually from other vineyards in the neighborhood, and the wines made are favorably known throughout the Australian Colonies. Higher up the hills, and beautifully situated on fine vine land, is the "Auldana" vineyard, 120 acres in extent. The wines produced here—both white and red—are light and delicate in character, and the bulk of them have been shipped to England for many years, and are still being shipped. This vineyard was commenced as early as 1846, by the late Mr. Patrick Auld, who in 1856 completed his planting. This is one of the largest vineyards—if not the largest—near Adelaide. Over the hills is "Highercombe" vineyard, twelve miles from Adelaide, at an elevation of 1,500ft. above the sea, the property of the Hon. R. D. Ross, Speaker of the House of Assembly. This is about forty-five acres in extent. Part of it was planted by Mr. G. F. Anstey forty-five years ago, and therefore it is the oldest vineyard in South Australia. The climate and soil are admirably suited to the select varieties of grapes from which Mr. Ross now makes the well known red and white Highercombe wines. This fact is evidenced by the perfectness in which the process of

fermentation is carried out, and the exceptional clearness and brightness of the wines within three or four months from vintage. The yield per acre is not large, ranging from 150 to 250 gallons, but Mr. Ross's aim has been to attain quality rather than quantity. These wines have been much esteemed in the London market. The red wines from this vineyard are delicate, and approach more nearly the Burgundy type than those from any other vineyard in the province. The white wine made of late years at Highercombe is of a pale straw color, very dry, good bouquet, and, if anything, of a Chablis type, possessing great merit and excellence. At Kanmantoo, about thirty miles east of Adelaide, Mr. C. B. Young has thirty-five acres of vineyard, principally *Shiraz* and *Mataro*, from which he makes annually 4,000 or 5,000 gallons of full bodied wine. Further east, and on the plains towards Lake Alexandrina, on the rich alluvial banks of Langhorne's Creek, are the vineyards of Mr. F. Potts and Mr. E. J. Hector. A large quantity of low class wines has been made at these vineyards, but the distance from Adelaide, and the small local demand has so disheartened the proprietors, that they have turned their cattle into the vineyards. This land is capable of producing, with heavy bearing kinds of grapes, upwards of 2,000 gallons to the acre, of low class wine.

Three miles west of Adelaide, on the banks of the River Torrens is "Bankside" vineyard, the property of Mr. Thomas Hardy, consisting of forty-five acres of vines, principally *Shiraz*. The soil is rich alluvial land, and yields from 600 to 1,000 gallons of ordinary wine to the acre. Grapes are also largely purchased from vineyards in the neighborhood of Adelaide, and the quantity of wine made during the last three years has been 100,000 gallons, annually. Muscatel grapes for raisins, and Zante grapes for currants are largely grown as well, from ten to twenty tons of dried fruit being manufactured annually. In this neighborhood are also several small vineyards, the produce from which is all purchased by Mr. Hardy. Mr. Hardy has, by enterprise, intelligence and shrewdness, done very much to advance the rural industries of the province, and the present satisfactory condition of the wine industry is largely due to his exertions. It may be of interest in this connection to remark, that at the Adelaide Exhibi-

tion, held in 1881, a prize consisting of a handsome piece of plate, offered by the Mayor of Adelaide, Mr. E. T. Smith, M.P.,—"to the "exhibitor who shall by his exhibit show that he has done most to "promote an industry or industries of national importance, and "likely to be a source of wealth to the Australian colonies"—was awarded to Mr. Hardy, accompanied by the following remarks by the judges "In recognition of successful individual enterprise of "much magnitude in various industries, as illustrated by his "exhibit. This comprises wines raised from 250 acres, and the "produce of other vineyards to which the jurors have given first "honors; fruits, and olive oils, many acres of orangery and of "orchard, yielding in addition to fresh fruits, raisins, currants, "figs, almonds, prunes, &c. Mr. Hardy thus, by his own exer-"tions, has proved in a marked degree, the productive capacity of "the country, has given valuable assistance in developing new "sources of wealth adapted to the climate of Australia, and has "further shown how much one industrious colonist can benefit the "community." In 1883, Mr. Hardy, accompanied by Mrs. Hardy and his son, made a tour through the vine districts of America and Europe, and his letters written *en route* and afterwards collected and published in pamphlet form as "Notes on Vine-"yards in America and Europe," are full of useful hints gathered by an intelligent and observant traveller.

North of Adelaide there are no vineyards until the Para is reached—twelve miles from the city—where on the rich alluvial flats are several small vineyards, which produce the finest *Muscatel* grapes for raisins, and yield from five to six tons per acre when well cultivated; and as much as £9 per ton has been paid for this description of grapes. On the Gawler river there are a few small vineyards. East of Gawler and about thirty-five miles from Adelaide is the South Rhine vineyard, comprising about sixty acres, which was planted by the late Mr. David Randall. The produce of this vineyard is now annually purchased by Mr. B. Seppelt, of Seppeltsfield. After leaving Gawler a few miles, some fine vineyard country is reached, extending from Lyndoch Valley to Angaston, having soil and sites that are admirably adapted to vine-growing. The first vineyard of note that is reached is that of Mr. William Jacob, of Moorooroo. It consists of about fifty

acres, and the wines from this vineyard are amongst the best produced in the colony—no trouble being spared in the management of the vineyard or the cellar. To the eastward, and situated in a lovely piece of country, is Pewsey Vale, the property of Mr. William Gilbert, whose father—the late Mr. Joseph Gilbert—was a great enthusiast in viticulture. The produce of this vineyard, which principally consists of *Carbinet* and *Reisling*, has accumulated in an extensive and well-kept cellar, and at least ten vintages are represented in the stock on hand. The wines made are light, fine, and delicate, and the Reisling is nearer in type to the Rhine wine than any that is produced in the colony. About Tanunda—a German settlement—are a number of small vineyards, the produce of nearly all of which is now sold to large vignerons, chief amongst whom in this locality is Mr. B. Seppelt, near Greenock. This gentleman—South Australian born, of German parents, is one of the most enterprising and practical men in the colony. At his residence, Seppeltsfield, he has about eighty acres of vines, principally the *Doradilla* and *Mataro*, and he is the purchaser of large quantities of grapes grown in the neighborhood. He makes annually over 100,000 gallons of wine, a large proportion of which is used for distillation, a business which Mr. Seppelt inherited from his father. The cellars and offices here are very extensive and complete, and are being constantly enlarged to meet the increasing requirements of the business. The distillery is the best in the colony, and cost upwards of £3,000. Mr. Seppelt is one of the foremost men in the business, and spares no trouble or expense to obtain the best information procurable on the several branches of the business. At Angaston—one of the prettiest parts of the colony—are the vineyards of Messrs. W. Salter & Son and of Messrs. S. Smith & Son. The vineyard belonging to the former firm comprises about forty acres, and turns out from 14,000 to 20,000 gallons annually of full-bodied red and white wines of the port and sherry type. Messrs. Smith & Son also have a large establishment, and purchase a considerable quantity of grapes that are grown in the neighborhood, and pay as much as £6 per ton for superior kinds. The annual vintage amounts to about 75,000 gallons. The Angaston wines are shipped in considerable quantities to New Zealand, they being well suited to the climate of that country, being stronger in alcohol than most of the Adelaide wines.

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At Watervale, sixty miles from Adelaide, is situated the vineyard of Mr. J. M. Richman, consisting of seventy-five acres. The cellars here are very extensive, and well built and planned—being second to none in Australia. The wines of this vineyard are mostly shipped to London as they mature. About Clare, are several vineyards, the produce of which is mostly consumed locally. At Seven Hills, Catholic College, the Jesuit Fathers have a vineyard of twenty-six acres, from which several thousands of gallons of wine are made annually.

There are several distilleries in the province, which purchase and distil the lower qualities of wine into spirits of wine, a product which is used for various manufacturing purposes. The manufacture of brandy has also been commenced by two or three persons, and great hopes are entertained, that in course of time, this may become an important industry.

## IV.—THE OLIVE IN SOUTH AUSTRALIA.

By Sir Samuel Davenport.

So similar is the climate of the settled portion of South Australia to that of countries in Europe and Asia where the olive thrives, that some colonists were early induced to procure stocks from France, Portugal, and Spain; and these were planted in and about Adelaide. Their healthy growth and abundant fruitfulness after a few years proved the soundness of these opinions.

It was under the stimulus to inquiry into new productions given by the announcement of the London International Exhibition, 1851, that the first attempt was made to extract the oil from the olive. Then the late Mr. William Giles, manager of the South Australian Company, who, in 1844, received from Marseilles fifty-one plants, comprising five choice varieties of olives, and planted them, and could now gather their berries, employed Mr. George Francis to express the oil, and at the London Exhibition of 1851, this produce gained "Honorable mention," on the ground of "its clearness, color, and flavor."

Since that event a gradual advance in the cultivation of the olive has been made by some individual believers in its special adaptation for South Australia, and now the Conservator of Forests favors its distribution in public reserves.

Meanwhile the high prizes uniformly acquired at International and Intercolonial Exhibitions in different quarters of the globe, even in an old and eminent olive country like France, have confirmed the highest views held of the olive and its oil as a local production. In a little brochure on "Olive Culture," published in 1877, at the printing office of the *South Australian Advertiser* newspaper, is the assertion that "No oil that has ever been sent "into the market surpasses in quality, lucidity, and creamy "delicateness of most delicious flavor the oil that is now produced "on the Adelaide plains." (Page 6.)

There being many varieties of cultivated olives whose merits for quantity or quality of oil differ, or whose rank is held in degrees of estimation relatively to national tastes, South Australia has now become rich in the possession of olive stocks of reputation secured to her from Malaga, Gibraltar, and Lisbon; from Cannes, Nice, and south of France, *via* Marseilles; and from Florence and Bari, *via* Brindisi. Some skilled French pruners of the olive have also been introduced, whose labors, and the instruction they must impart to others, cannot but prove of great advantage to the future cultivation and production of the olive.

Had South Australia been colonised by Greeks, or Italians, or French olive growers, it most probably would, long ere this, have produced large quantities of oil and preserved olives for the various markets of the Old World. Nevertheless, in many gardens, and in some special plantations of the tree in and about Adelaide, the silvery hue of the under surface of the foliage, as inverted by the winds, calls strikingly to mind the scenery of well-known localities of its cultivation, as of Cannes or Mentone on the Mediterranean, or of the banks of the Upper Tagus.

The calcareous nature of the soils around Adelaide, and the warm and dry climate assist in bringing the fruit of the olive, as of the vine, to remarkable perfection, whilst, for the benefit of the laborers, as well as of the farmers, the olive harvest conveniently follows on the vintage, as the vintage follows on the harvest times of wheat and other grains.

## V.—BEEKEEPING.

There is one rural industry which, though long established in

the colony, has only recently shown signs of vigorous development —this is the industry of beekeeping. The modern appliances for beekeeping have so wonderfully improved, and the science of apiculture has of recent years made such rapid strides that—thanks to the enterprise and patient study of a few intelligent colonists—the industry has taken a firm place amongst the rural employments of the people. The most pretentious apairy in the colony is the "Fairfield Apiary," near Mount Barker, of which Messrs. Coleman & May are the proprietors. The first season's operations were most successful. They commenced with twenty-seven hives, increased this number to 109, and obtained 14,300lbs., or nearly 6½ tons of honey of excellent quality. This success has stimulated many others to engage in the enterprise, thereby giving employment to several makers of hives and appliances. The formation of a Beekeepers' Association has also been helpful to this end, and in connection with this institution Mr. A. E. Bonney (one of the most skilful and enthusiastic apiarists in the colony) who is Honorary Secretary of the Association, is deserving of mention, as one to whose exertions the colony is much indebted for the present condition of this industry. Some assistance has been given to beekeeping by the Chamber of Manufactures—an institution whose aim it is to introduce and encourage new industries. The Chamber has imported Ligurian queen bees for distribution to expert beekeepers, and has also secured the passing of an Act to make Kangaroo Island a close district for Ligurian bees. The situation of Kangaroo Island is very favorable as a depot for bees, and it is confidently expected that, by careful selection and skilful breeding, a superior strain of Ligurian bees will be produced, so that in future years Australasian beekeepers will draw their stocks from there instead of incurring the risk of importations from Europe.

## VI.—PASTORAL SETTLEMENT.

By Mr. E. W. van Senden.

The pastoral occupation of the land and its results have a most important bearing upon the national well-being of the province, not only by reason of the enormous tracts of land purchased or leased from the Government for depasturing sheep and cattle, and

the amount of capital which is invested in the enterprise, but also from the fact that it contributes so largely to the national wealth of the country. The export value of wool exceeds all other staples, amounting to about £2,000,000, and while cereals impoverish the soil, the process of wool-growing improves it in every way.

A careful review of the rapid progress of the pastoral settlement of the colony is not without great interest, especially when there are taken into consideration the apparently insurmountable difficulties that presented themselves to the early squatters. Railways, until quite recent years, were unknown in the pastoral districts; immense distances had to be traversed in either desert or thick scrub country to reach the different plateaux selected for stocking, and every thing necessary to the sustenance of human life had to be transported. It was, therefore, only by continued persevering energy, often at great personal hardship, that the country was opened up by the pioneer squatters; and what were, only a few years since, vast tracts of waste land are now converted into thriving sheep and cattle stations.

The total area of South Australia comprises 578,361,600 acres. This includes the Northern Territory, or that portion of the province above the 26th parallel. This country was for some time considered unsuitable for sheep, but it has been taken up for pastoral occupation, and wool of a good quality is being produced there

It is computed that 300,000,000 acres are fitted for pastoral occupation; of this area 247,000,000 are held under lease in different ways, either with pre-emptive right at a nominal rent, or under pastoral leases for fixed periods; or under annual leases for depasturing purposes.

At the present time there are 53,444,411 acres enclosed, of which 2,785,490 acres are under cultivation, leaving 50,658,921 acres fenced and occupied for grazing. Over lands held under lease the Government reserves the right of resumption, if required for agricultural or State purposes.

Fencing in connection with sheep runs was first introduced about the year 1865, prior to which the flocks were shepherded. With fencing a better system of watering the sheep was adopted, experience having proved that travelling them long distances to

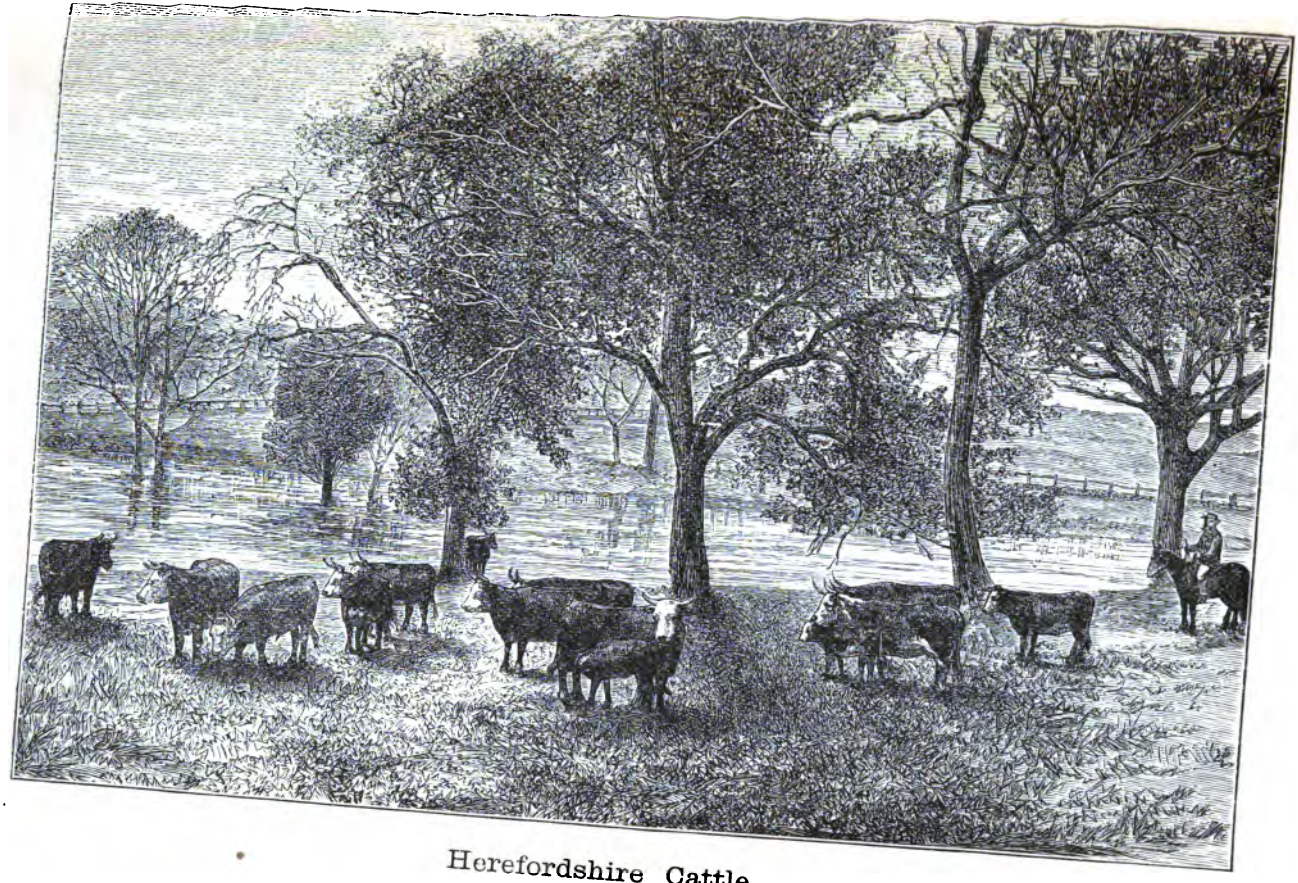
water was highly detrimental to the wool, as it gathered more dust, greatly reducing its market value by reason of the foreign matter in the staple, and in some measure its intrinsic value by the discoloration produced by the dirt collected in the fleeces. When once fencing was commenced it quickly became general, and by 1872 the principal stations had been divided into paddocks, varying in size from a few square miles up to a hundred or more square miles. The fence most in favor, on account of its durability, low cost, and the small amount of labor involved in its erection, consists of posts firmly planted in the ground about 10ft. apart, through which three or more strong iron wires are stretched.

With the inauguration of fencing a large expansion of settlement took place, and consequent rapid increase in the number of sheep depastured. The intrinsic value of the wool was also increased by the improved condition in which it was placed in the market. The export value, according to the Government returns was, in 1864-5, £775,656, whilst after fencing was adopted the value more than doubled itself in nine years, as in 1872-3 it had risen to £1,647,387.

The progress of the squatting industry can be judged by the following returns of South Australian grown wools sold in the London auctions, from the time of the first direct shipment in 1845 to the present date:—

| Date. | Bales. | Date. | Bales. | Date. | Bales. | Date. | Bales. |
|---|---|---|---|---|---|---|---|
| 1845 .. | 4,832 | 1855.. | 16,472 | 1865.. | 45,505 | 1875.. | 101,544 |
| 1846 .. | 5,994 | 1856.. | 16,618 | 1866.. | 40,696 | 1876.. | 102,067 |
| 1847 .. | 7,133 | 1857.. | 18,786 | 1867.. | 45,901 | 1877.. | 108,134 |
| 1848 .. | 9,827 | 1858.. | 20,050 | 1868.. | 55,173 | 1878.. | 104,692 |
| 1849 .. | 10,400 | 1859.. | 22,790 | 1869.. | 65,137 | 1879.. | 111,884 |
| 1850 .. | 11,822 | 1860.. | 23,554 | 1870 | 68,679 | 1880.. | 109,917 |
| 1851 .. | 12,268 | 1861 | 27,257 | 1871.. | 65,960 | 1881.. | 112,827 |
| 1852 .. | 12,552 | 1862.. | 34,020 | 1872.. | 70,522 | 1882.. | 122,167 |
| 1853 .. | 11,437 | 1863.. | 36,753 | 1873.. | 74,918 | 1883.. | 108,487 |
| 1854 .. | 14,110 | 1864.. | 40,609 | 1874.. | 85,590 | 1884.. | 118,357 |

To these figures must be added the wools shipped direct to the manufacturer, which in 1884 amounted to about 20,000 bales.



Herefordshire Cattle.

The national importance of this industry is much enhanced by the fact that a large quantity of wool grown in the adjoining provinces (principally on the Darling and Murray rivers) is shipped from our ports either direct to Europe or to Melbourne. The total shipments from South Australian ports of extraneous wools amounted during the season of 1884 to about 55,000 bales, making the total 186,617 bales. It is, therefore, not merely the value of the wool grown here that must be considered, but the great influence which this industry has upon the general commerce of the country. During the past season thirty-two sailing vessels and sixty-five steamships were engaged in loading wool for Europe, and these in their turn employed a large fleet of coasting steamers and sailing vessels to bring the wool from the outports.

It is comparatively only a short time since steamships were employed for the transport of wool, and it is interesting to note the favor into which this means of conveyance has grown, as shown by the following figures:—

| | 1875-6. Bales. | 1884-5. Bales. |
|---|---|---|
| Shipments from South Australian ports by sailing vessels | 109,136 | 83,402 |
| Shipments by steamers | 340 | 103,215 |
| | 109,476 | 186,617 |

South Australia, by its great extent, stretching as it does from the 38° to the 11° of south latitude, offers a very great diversity of climate, varying not only in difference of latitude, but also in the various altitudes and changes in the natural character of the country and the sub-strata.

From this reason its capacity for the production of wool is almost unlimited, the finest merino and the coarsest crossbred being grown with equal success in the various districts suited to the respective breeds of sheep. Herein is the secret of the success of some flockmasters over others—the knowledge they possess of the class of sheep most adapted to the climate and soil of their particular runs, a knowledge which has been acquired by patient investigation and intelligent observation.

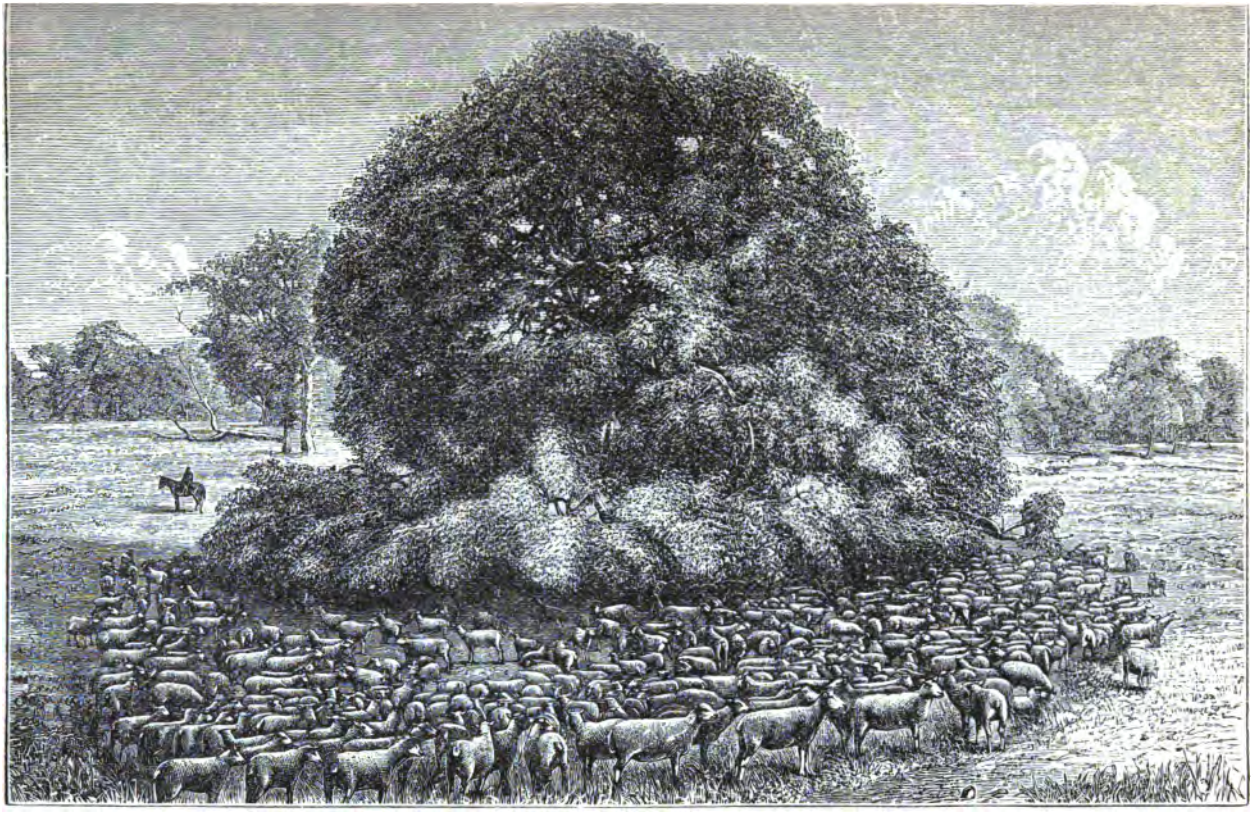
South Australia is admittedly the healthiest province in Australasia for all kinds of stock; its horses and cattle possess stronger constitutions, are bigger framed, and hardier than else-

where—as a proof of which we are supplying a large number of the remounts for the Indian army, and Colonel Williams, in a recent report made by him after a personal visit to this country to gather information on this subject, spoke very highly of South Australia as a breeding place for horses.

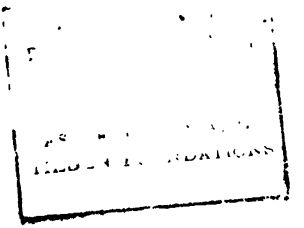
No expense has been spared by our breeders in obtaining the best blood to improve the race, not only of thoroughbreds but of weight-carriers and draught horses. The late Hon. John Baker, Mr. C. B. Fisher, Sir Thomas Elder, Mr. J. H. Angas, the late Mr. Joseph Gilbert, Dr. Browne, Hon. G. C. Hawker, the late Mr. W. Gerrard, and others, have imported the best stud stock that could be obtained, and the exhibits at our Agricultural shows would be a credit to any country.

Our sheep are renowned for their healthy and vigorous constitutions. Disease is almost unknown, the hot dry climate preventing the ordinary ailments, such as fluke, footrot, scab, &c., from attacking them, except occasionally on the swampy land on the coast, where the sheep sometimes become "coastey." The careful breeding of the merino sheep has been carried on most successfully by some of our leading squatters, and they have attained a very high position at the principal shows throughout the colonies. Our wool is not generally so fine in the hair as that of the Riverina or the Mudgee country of New South Wales, but it is of a very valuable character from its great evenness of texture throughout the fleece and its good sound combing qualities.

South Australia possesses some of the most renowned stud flocks in the world. Amongst them may be mentioned those of Mr. John Murray, the Hon. A. B. Murray, M.L.C.; Hon. G. C. Hawker, M.P.; Mr. J. H. Angas, and the Proprietors of the Canowie station. No expense is spared by these breeders in keeping up the character of their sheep, and the champion ram at the last Melbourne Agricultural Show was secured for this colony at a cost of £1,150. This sheep, which was bought by Mr. Angas (whose enterprise in relation to stock raising is deserving of special mention) was allowed by all judges to be the most perfect that had ever been exhibited in Australia, and was bred by Messrs. W. Gibson & Son, of Tasmania.



**Flock of Sheep and Gum Tree.**



The sheep bred from the above-mentioned South Australian flocks are much sought after by breeders from the other colonies, who often find the introduction of a new strain very beneficial to their flocks. It is no uncommon thing for our stud rams to cut fleeces weighing over 18lbs. of good merino wool, and where—from continuous effort to obtain the finest possible fleece—the wool has become weak in fibre and open in the lock, the cross with sheep of such vigorous constitution and producing such sound combing wool as these stud flocks of South Australia, may always be looked upon to give a satisfactory result.

South Australia may be divided into eight different districts, each producing wool of a distinctive character and quality.

The greater part of the country in the vicinity of Adelaide, on which in the early days the flocks used to be depastured, has been alienated by the Government, and taken up for agricultural, horticultural, and other purposes, so that, with the exception of land of which the freehold had been purchased, there are comparatively few sheep runs near Adelaide.

The first district that claims our attention is the "MIDLAND," the most valuable and best wool-growing country of the colony. It consists of a series of hills, well grassed, watered, and wooded, stretching from the Murray hills, near Angaston, in a northerly direction, to Mount Remarkable and the Flinders Ranges. It is in this district that the principal stud flocks before referred to are found, and it cannot be surpassed for the production of sound combing wool.

The following are the principal wools grown here, indicated by the brands known in the market:—

BUNGAREE.
BOOYOOLIE.
BUNDALEER.
BROWNE.
CANOWIE.
DC
YONGALA.
D & P.
ABM
WIRRABARA.
C
I. MURRAY.
HILL RIVER.
HUMMOCKS.
DTN.
AME
ROYAL.
BEETALOO.
GG
MT. CONE.
GUM CREEK.
BB
M.
JB
M
WT

The "SOUTHERN" district, or that to the immediate south of Adelaide, is also of a good description. It is somewhat similar

to the midland country, being hilly and generally well grassed, but, not lying so high, the wool is generally finer and not so bold in the staple. Amongst the principal stations in the southern district are those from which the following well-known market brands come, viz.:—

A. BELL.
A. HAY.
GILBERT.
GRIEVE
HGR
MP.
M & H
FORK TREES.
JGR
EDEN PARK.
W. GUNN.
JHG.
JG
MP.
H
CC.
B
I. MURRAY.
JB
TERLINGA.
STIRLING
HV.
SHANNON
BAGOTS WELLS.
WLM
BURNSIDE.
DS
YATARA.
GM
ROSEBANK.
PMM.
WG
RAPID BAY.
J
LAKESIDE.
GUM BANK
PMcA.
HAE
WB
HIGHLANDS.

The "SOUTH-EAST" is the district running down to the western boundary of Victoria, and consists of wide grassy plains and swamps. The character of the wool is fine, generally strong, of good spinning quality, of a bluish tint, and fairly clean. The principal brands from the district are—

BINNUM.
CANTARA.
GLEN ROY.
MOYHALL.
MOORAK.
EMU FLAT.
NALANG.
KILLANOOL.
NARACOORTE.
MINGBOOL.
TMc
MF
PERKINDOO.
WS.
IE
YALLUM.

The "EASTERN" district comprises the low plains along the Murray Flats, and produces a fine soft staple of good spinning qualities. It is in this district that the rabbit plague is perhaps most felt. Adjacent to the sheep walks are thick scrubs, where the rabbits cannot be easily disturbed, and the havoc they commit on the feed will be understood when it is stated that one station, which four years ago produced at least 1,500 bales of wool, has

Pure Merino Rams.

this year only returned 400 bales. Amongst the principal clips from this district are the following:—

ABM
BPG.
A. McFARLANE.
ANA BRANCH.
CHOWILLA.
CHUCKABEND.
CUDMORE.
KULNINE.
NED'S CORNER.
NWB
MURRAY.

M
—
MARKARANKO.
GLENLOSSIE.
ECS.
RT & CO.
LAKE VICTORIA.
HWT.
THOM.
ROGERS
PORTEE.

TAPALIN.
THURK.
WAIKERIE.
WELLINGTON.
XH
LAKE.
XH
NARRUNG.
JB
GARA.

The "WESTERN" district includes Yorke's Peninsula, the lower portion of the Eyre Peninsula (better known as the Port Lincoln district), and the country along the western coast. The wool from this district is of a fine silky quality, and fairly light in condition, though in some parts along the coast, where the soil is loose, the fleeces often contain a considerable quantity of sand, which detracts from the value of the wool. The following are the chief brands:—

FOWLER'S BAY.
JOHN DUNN
COOEANNA.
JOHN DUNN
CANDULKA.
GUM FLAT.
C
LH.
GH.
HILTRUBY.
HOLROYD.
HORN
MARY VALE.
HORN
PETINA.
JCH
CHICKERLOO.

MORTLOCK.
OKILTABIE.
OSWALD.
PATCH
JS.
P. MAURICE.
PMK.
KALKA.
L
K
PETRA.
NANWOORA.
TALIA.
TCW
PBJ

TENNANT.
TOD RIVER.
WETRA.
YPAM.
TIATUKIA.
WB
TERRE.
T
WT.
SHELL.
WARROW.
MT. WEDGE.
KOPPIO.
PUCKRIDGE.

The "NORTH-WESTERN" district lies to the west and north-west of Port Augusta, and is bounded on the east by Lake Torrens, and embraces the upper part of Eyre Peninsula. The wool from here is of a good useful quality, and from the lower portion of this country it is generally clean, strong, and well-conditioned. The upper portion of this district, however, running into higher latitudes, produces a shorter finer wool, but from the

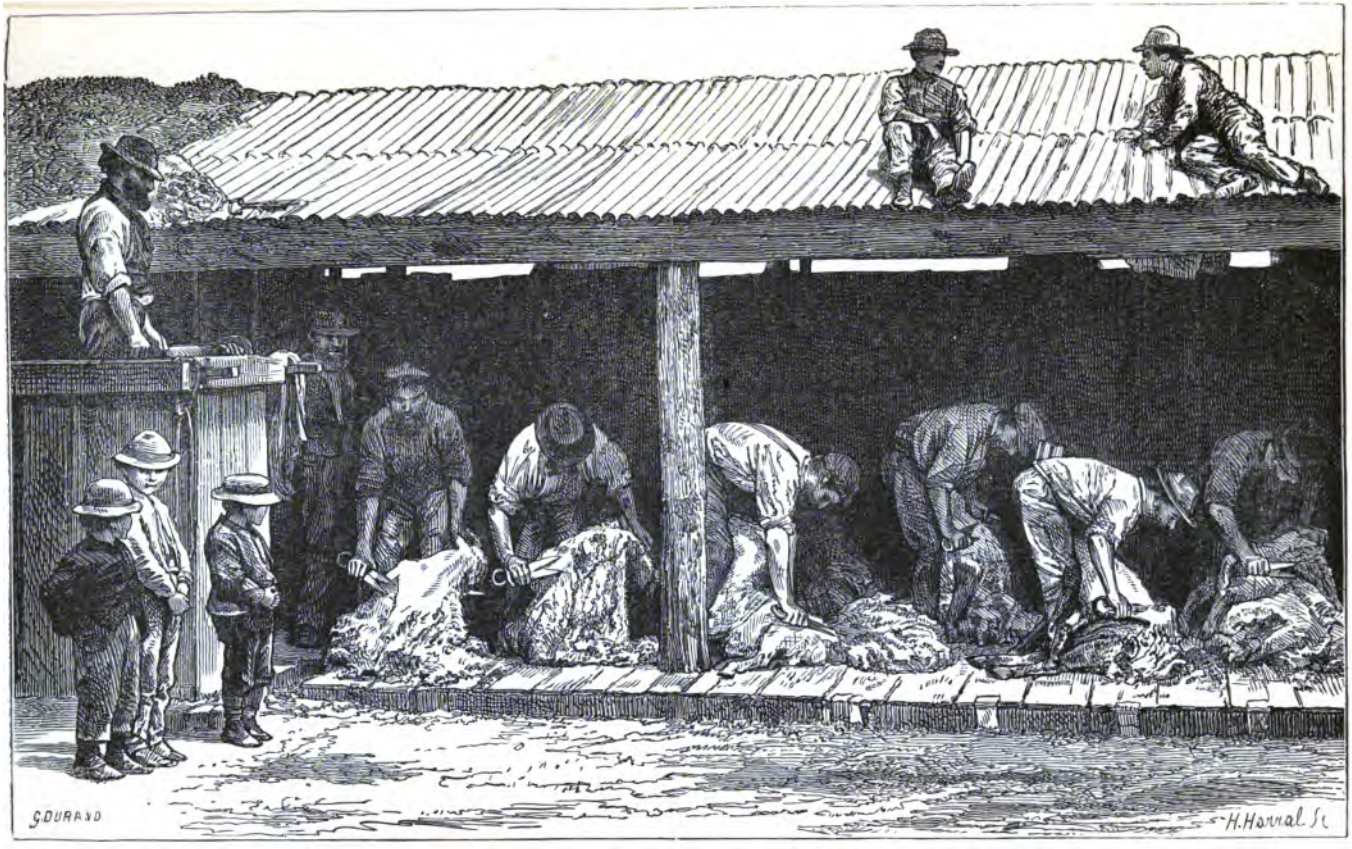
friable nature of the soil the staple is often charged with dust, rendering it of a more wasty character than that grown lower down. The principal brands from this part of the colony are:—

| | | |
|---|---|---|
| ARCOONA. | PANDURRA. | PONDONA. |
| CAROONA. | PARAKYLIA. | OAKDEN HILL. |
| CORALBIGNIE. | PERNATTY. | EURO BLUFF. |
| CARRIEWERLOO. | LINCOLN GAP. | YARDEA. |

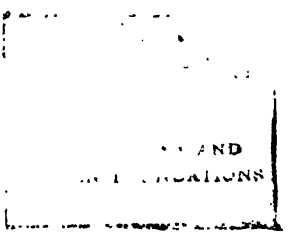
The "NORTH AND NORTH-EASTERN" district comprises the largest portion of the wool-producing country in the province. This district commences at Terowie; is bounded on the upper west by Lake Torrens, and on the east by the New South Wales border, and includes the far outlying runs on the borders of Queensland, and such tracts in the far north as have been found suitable for pastoral settlement. The lower portion of this district, as far as the Barrier Ranges, consists of good open hilly country, with saltbush and grassy tracts; beyond these ranges some poorer country is met with, till the watershed of the Cooper's Creek and Diamantina is reached, north of parallel 28, where a great improvement takes place, and very good pastoral country is found lying between Lake Eyre and the Queensland border.

It may here be mentioned that the energy and perseverance of certain squatters has been the means of opening up this far outlying country, and for this purpose camels have been introduced. Sir Thomas Elder, one of our leading and most enterprising station-holders, some years since started a breeding establishment at Beltana for these animals with most favorable and successful results. By the aid of camels, vast deserts have been bridged over, and valuable tracts of country that would otherwise have remained unstocked have been rendered available for grazing. The camels have also proved invaluable to private parties and the Government in conducting surveys, as well as for the conveyance of stores and necessaries of life across the desert plains.

The wool of the North and North-East is of a good and fine merino quality, but the loose nature of some portions of the country causes the staple to contain a large quantity of dust, hence the comparatively lower prices it commands. The country running up the Queensland frontier around Cordillo Downs promises, with good seasons, to produce a high-class wool, and is evidently well




**Sheep Shearing.**



suited to merino sheep. This fact will lead to the opening up of a very large tract that has hitherto been but little stocked.

The upper portion of the north to the north-west of Lake Eyre, and stretching into the Northern Territory, has not proved itself so suitable for wool-growing. The extreme heat and general character of the climate check the flow of the pabulum from the secretory glands of the skin through the centre of the fibre, by which the innumerable cells of which the hair is composed are fed, and causes the wool to lose its elasticity, and also the serration which is indispensable for spinning. The country is, however, being occupied by large squatters in the assurance that the character of the wool may be improved.

Some of the largest stations in the colony are found in the north-east, among which may be cited Paratoo. This station, with its out-stations, has a total area of 3,500 square miles, or 2,240,000 acres. After a few good seasons, this station has produced 4,500 bales of wool, the produce of some 250,000 sheep. The average carrying capacity of this run is one sheep to ten acres.

The principal runs in the "NORTH-EAST" are represented by the following brands:—

PARATOO.
MUTOOROO.
MUNDI-MUNDI.
WINNINNINIE.
BOOLCOOMATTA.
BIMBOWRIE.
ANTRO.
STURT MEADOWS.
BARATTA.
COCKRUM.
CURNAMONA.
HILES.
QUONDONG.
BIRKSGATE.
H.F.
GW
OOPINA.
OULNINA.
KOON.
MT. BROWNE.
PVD.
LANGAWIRRA.
POOLAMACCA.
TEETULPA.
TYR.
CORONA
PD
L
YALCOWINNA.

The "NORTHERN" runs produce the wool bearing the following brands:—

BELTANA.
ANGO.
ABM
MYRTLE SPRING.
ARKABA.
BW
ANDAMOOKA.
B.Y.
CNA.
KOPP.
F
EDIACARA.
WONOKA.
WARRAKIMBO.
WILLIPA.
MOOLOOLOO.
MRCH.
ARTEMAR.
MOTPENA.
WITCHELINA.
WLM
AROONA.
EDEOWIE.
WOOLTANA.
COLD.
CHR
KALAMARINA.
LYNDHURST.
PRICE.
MOONAREE.

All the principal brands of South Australia are included in the foregoing lists.

During the last few years the local wool auctions have made great progress. Buyers from the different manufacturing centres attend each season, and large quantities of the staple are purchased and consigned direct to the manufacturer or dealer. The quantity thus disposed of during the season of 1884-5 in this market, amounted to about 37,000 bales.

According to the Government returns for 1884, the total stock in the colony was as follows:—Horses, 168,420; cattle, 389,726; sheep, 6,696,406. From these figures it will be seen that sheep hold the premier position in South Australia. The number of sheep that the country will carry varies very much, in some places running as low as twenty-five acres per sheep, and in others the carrying capacity is ten to fifteen sheep per acre.

Another industry to which reference must be made in connection with wool-growing, is the Woollen Factory that has been started recently at Lobethal for the manufacture of tweeds. It was only natural to suppose that sooner or later the practice of sending the fleece away to be made into cloth, and re-imported in that state, would be discontinued, and the result of the trial at the Lobethal Tweed Factory has been very satisfactory. At present the production is 1,400 yards per week, the whole of which is readily disposed of to the Adelaide cloth merchants. This cloth is fast coming into favor, as, from the total absence of shoddy, its durability is very much greater than the Home-made article. It is hoped that the company will have a prosperous career.

Of the 389,726 cattle at present depastured, 131,481 are in the Northern Territory, whilst in the same portion of the province there are only 51,000 sheep out of the total of 6,696,406.

An important branch of the industry is the fellmongery or wool-scouring trade. It is estimated that 20,000 to 25,000 bales of wool are annually purchased by the local fellmongers, sorted, scoured, and shipped to London for re-sale, or direct to the manufacturer.

The treatment of the sheepskins and the hides forms another important industry. There are several large tanneries where not only the skins and hides of this colony are converted into excellent leather, but also considerable quantities from the adjacent colonies.

## VII.—CAMEL CARAVAN TRADE.

The arid nature of the interior country and the semi-tropical heat which prevails during the greater portion of the year, have made communication with this distant country exceedingly difficult, but through the foresight and enterprise of Sir Thomas Elder camels were introduced, and the caravan traffic has undergone great expansion, so that the interior transport trade is done almost entirely by camels. Mr. N. E. Phillipson, manager at Beltana Station for Sir Thomas Elder, has supplied the following interesting information on the subject:—

Camels were first imported into South Australia from India by Sir Thomas Elder, in January, 1866, 109 animals being then safely landed at Port Augusta, the most northern port of the Colony, and thence travelled 230 miles to Umberatana Station, where they were most successfully employed in the transit of goods to various stations in the interior. The animals have proved themselves to be of the greatest value in times of the most severe drought, to which the interior of the Continent is subject. They have been known to travel twenty-five miles per day for nine successive days, under a tropical sun, and heavily laden, without a drink of water; and no other feed than that furnished by the scanty bushes. The first great national work on which the camels were employed was in the construction of the Adelaide and London telegraph line, in 1872, when 100 of them were made use of in carrying wire, insulators, &c. During the severe drought in 1881, a large number were the means of saving the lives of the starving population of the Albert goldfields, in New South Wales, east longitude 141°, south latitude 29°.

Explorations of this vast continent have, by the use of camels, been rendered a comparatively easy task. With these wonderful animals explorers were able to make a certainty of obtaining the desired goal, when with horses their attempts must have proved a failure, as evinced from records of exploration by Colonel Warburton, Ernest Giles, and others. One important feature in the use of camels in South Australia is that they are harnessed to wagons like a team of horses, eight of them taking four tons and travelling fifteen miles per day. The use of camels for draught purposes is not novel, but the weight of the load they are able to draw is stated to be exceptional, and is a testimony to the beneficial influence of our climate on the wind and limb of this useful animal

Camels thrive particularly well here, being perfectly free from any disease after becoming acclimatised. Some of them arrive in the Colony suffering from a species of mange, which after their arrival seems to disappear; but later, when they become fat, it attacks them in a most virulent form, the parasite appearing to be situated in the flesh or blood. From this disease large numbers have died; but those which survive the attack continue to do well. Camels are workable from three years to twenty-five years of age. The value in the market for animals bred in the Colony is :—

| | £ | s. | d. |
|---|---|---|---|
| Pack bulls | 60 | 0 | 0 |
| Pack cows | 65 | 0 | 0 |
| Wagon bulls | 65 | 0 | 0 |
| Wagon cows | 70 | 0 | 0 |
| Riding bulls | 70 | 0 | 0 |
| Riding cows | 75 | 0 | 0 |

Some of the imported animals have been disposed of at as low a price as £40 per head, with the attendant risk of mange while becoming acclimatised. About 500 camels have been imported from India during the past eighteen months, out of which about 150 have died. There are at present about 1,300 camels employed in conveyance of stores, &c., into the interior of the Colony, Queensland, and New South Wales. Camels are in general use by the South Australian Government in the hot and dry districts, being employed by the telegraph, police, survey, water conservation, and geological departments. In fact they are the only motive power that are of any service in times of drought in the interior.

From the police department the following interesting information has been received with reference to the performances of camels in this colony, viz. :—Full-grown camels will take on an average, 5 cwt., and one camel carried 12cwt. over sandhills, whilst a police camel took 8cwt. for a considerable distance. Occasionally, iron tanks are carried by them, notwithstanding the awkwardness of the loading. The riding camels also travel exceedingly well. One did the journey from Beltana to Port Augusta, a distance of 150 miles, within twenty-four hours. Mr. Phillipson rode a camel sixty miles in six hours, with only one stoppage of ten minutes, and they are often ridden fifty miles a day for from seven to ten days. Thirty miles a day can be kept up for a month. In a time of drought, when the country was blocked for horses, Mr. Ernest Giles travelled with camels seventeen days during hot weather

without water, except about three gallons obtained on the ninth day out. The most remarkable performance, however, is that of Mounted Constable Bannigan, who rode a camel in pursuit of an offender, for a distance of 400 miles, and on returning, covered a distance of 200 miles in three days and a half, without distressing himself or the beast.

Consignments of camels are occasionally received from India, principally by Mr. H. J. Scott. This gentleman represented the colony at the Calcutta Exhibition; and while in India he visited Bikanir in the Rajpootana State, the soil and climate of which resemble those of South Australia, as do also the salsalacious plants and herbage, which constitute the food of the camel. These importations have proved successful, the animals escaping the mange which so often affects camels coming from districts whose climatic conditions are different from those of this colony.

The development of the camel-caravan trade is an interesting feature in the record of South Australian enterprise. Without these useful animals the settlement of the interior must have proved tedious and precarious, and many of the public works—telegraph, railways, and water conservation works—could not have been undertaken without excessive expense.

## VIII.—AGRICULTURAL SOCIETIES.

Much assistance is given to the development of the agricultural, horticultural, and pastoral resources of the colony by the Royal Agricultural and Horticultural Society, whose periodical exhibitions of produce and stock are amongst the most popular engagements in the city. The society is assisted by a liberal grant of money from Parliament, and is managed by an influential committee. The late Hon. John Baker, Sir Samuel Davenport, Hon. R. D. Ross, M.P., and Mr. John Howard Angas, J.P., have most recently held the office of President of the Society. In addition to the stimulus given to the producing interests by exhibitions, the papers read at the meetings of the Society and the discussions thereon, are the means of disseminating much information of a useful character. In addition to the grant to the central Society, Parliament also subsidises a number of country branches which have a fairly substantial income and regularly hold exhibitions of produce.

## IX.—MANUFACTURES.

The manufacturing industries of South Australia are not very extensive, the attention of the people having been chiefly devoted to the development of the natural resources of the country. The industries which have been inaugurated are nearly all allied more or less closely to one or other of these occupations. Milling, ore-smelting, tanning, and the manufacture of agricultural and mining machinery are the oldest and best established of these businesses. During the last few years a tweed factory has been in operation at Lobethal, a town about half-way between Adelaide and the River Murray, where a German population chiefly supply the requisite hands. The trade has not assumed large proportions, but bids fair to be acclimatised. The Government have used the cloth manufactured for volunteer suits and some other public purposes. The quality of the material is excellent, but some difficulty is experienced in putting so fine a finish upon the goods as the older European manufacturers, by means of their complete appliances and highly-skilled labor, are enabled to do. The milling industry is one that has taken a high rank, South Australian flour having gained the world's prizes. Our flour is shipped not only to England but to most of the adjoining colonies, its superior quality being universally acknowleged. The millers are now extensively introducing the new roller mills to keep pace with the modern demand. Copper-smelting is now at a low ebb, owing to the low value of the metal, but there is a fair reason to anticipate that the loss will be largely made up by the production of silver from the Barrier Ranges, on the New South Wales border, and from some other discoveries nearer Adelaide. The latter have not been fully tested yet, but some encouraging assays have been obtained. The manufacture of reaping and winnowing machines, ploughs, and scarifiers has been one of the most widely-distributed industries. Some years ago there were large importations from England, but the ability of the local makers to adapt the machines to the climate and other local requirements, although at a somewhat higher price, has secured them a large proportion of the trade. Improvements in construction are continually being made for doing better work

or saving labor. This has been especially the case in the last few years with regard to implements for working scrub and stony land, which are referred to in another part of this handbook. Tanning and wattle bark-stripping, wine-making, olive oil making, and fruit preserving are occupations particularly adapted to this climate and soil, and are making gradual progress; but the field is not occupied as it should be, and it is hoped that greater progress will be made in the next few years with industries of such a substantial and otherwise desirable character. The new homestead law, which enables a working man to rent a twenty-acre block from the Government on a very small rental, is expected to lead to a great extension of this class of settlement and resulting industries. There is a fair proportion of general engineering work being done, chiefly in Adelaide and Port Adelaide. There are also machinery works of importance at Gawler, Kapunda, and other country towns. The railways are almost without exception under Government management. The goods wagons are now all manufactured in the colony, the contracts being principally let by tender; and of recent years a number of carriages have also been constructed here, as have also a number of tramway carriages for the Government and private companies. The locomotives are all imported from England. The repairs to Government rolling-stock are effected in the Government workshops, where several hundred hands are employed, and very efficient machinery is provided. The engines, although made in England, are planned by Mr. Thow, the Locomotive Engineer, and very important savings are stated to have been effected by the adoption of this method. Some of the recently-constructed engines, for travelling over the Hills Railway, which forms part of the connecting line beween Adelaide and Melbourne, on a grade of 1 in 45, are very highly spoken of. There is fair proportion of general manufactures. The following are the numbers of hands employed in the principal industries:—Milling, 644; boots and shoes, 796; brickmaking, 363; clothing, 1,138; foundries, 1,137; tanneries, 261; tobacco factories, 115; winemaking, 118. The above were the number returned in 1884, the latest published statistics.

## X.—MINING.

COPPER mining has been a large and important industry in South Australia. On more than one occasion the wealth poured out from rich copper mines has stimulated enterprise, encouraged investment, and given remunerative employment to a large number of persons. Unfortunately, at the present time (1886), the copper industry is unprecedentedly depressed. The low rate of copper, and the heavy output in other countries, especially in South America, where the cost of production is low, have led to the practical suspension of copper mining in the colony. This industry has, however, had such a marked effect upon the colony at times of severe depression that a few particulars respecting the principal mines will not be out of place.

### KAPUNDA.

The mine at Kapunda has the distinction of being the first copper mine discovered in South Australia. In the latter part of 1842, the late Mr. F. S. Dutton found some green carbonate of copper on what was then a sheep run belonging to himself and the late Captain Bagot, and on communicating his discovery to that gentleman, Captain Bagot produced a similar specimen which had been picked up by his son, Mr. C. S. Bagot. Steps were at once taken to secure the land. An eighty-acre section was purchased from the Government at the upset price (£1 per acre), and a box of specimens was sent to England for assay, which gave an average of 23 per cent. for the surface out-croppings. Encouraged by this report, arrangements were made to commence mining. The mine was opened by a holiday demonstration, and very soon Kapunda became a scene of active work. A considerable quantity of ore was turned out, and a large number of drays and teams were employed in carting the produce to Port Adelaide, a distance of about fifty miles. Evidence of the advancement in value of surrounding property is supplied by the fact that when the proprietors of the mine wished, sometime afterwards, to extend their holding, an adjoining section of 100 acres was run up to the high figure of £2,210, at which price it was purchased by Captain Bagot, and so became added to the mine property. Kapunda soon became a busy and thriving township, and is now a provincial town of some considerable importance. The mine is not now being

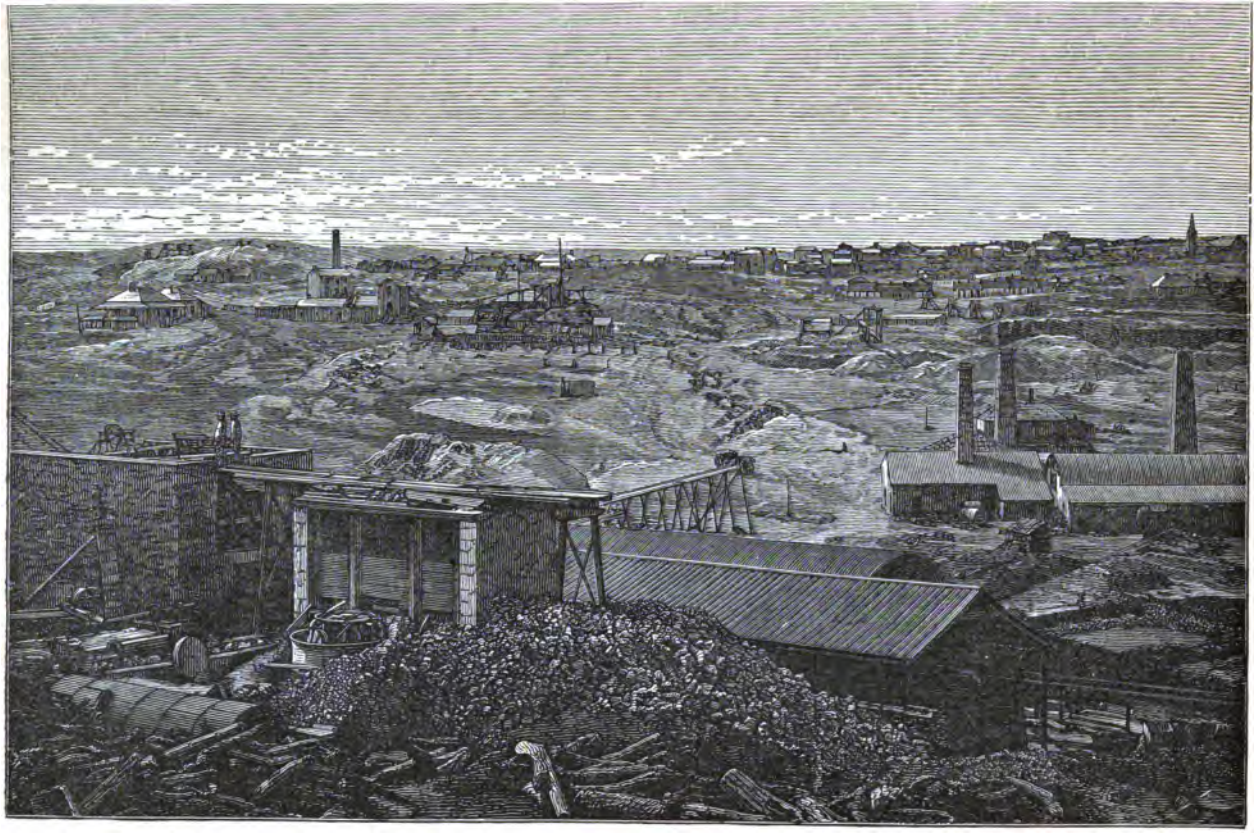
worked, but during the years that it was in operation a large quantity of ore was got from it. Complete statistics are not accessible, but the aggregate output of mineral wealth may be stated in round numbers at about a million pounds sterling.

### The Burra Burra.

Forty years ago (in 1845) there was formed in Adelaide a joint-stock company, designated the South Australian Mining Association, whose object was to develop the mineral treasures of the colony, about which some fascinating reports were abroad. The secretary of the company was Mr. (now Sir) Henry Ayers, a gentleman who still holds that position. In June, 1845, Mr. Ayers received from a shepherd some valuable specimens of copper ore, which he stated had been obtained from Mr. F. H. Dutton's run, about ninety or 100 miles from Adelaide, and shortly afterwards, on the site of the far-famed Burra Burra, an important discovery of red oxide was made by a teamster, and immediate steps were taken to test its value. A small party of miners was despatched, and on September 29th, 1845, operations were commenced by blasting and quarrying the outcrop of red oxide referred to, and sending the ore by drays to Port Adelaide for shipment. The returns were such as to encourage a vigorous working of the mine, the richness of which speedily became proverbial. The dissemination of so much money in the colony, and the development of such large sources of labor, gave an immense stimulus to the province at a time when such a stimulus was greatly needed. Some idea of the rapid expansion of the company may be gathered from the fact that, although the Association began with a staff of a dozen or so miners, and had a modest capital of £1,800 with which to develop a property comprising 10,000 acres, a net profit of £20,000 was declared on the first seven months' work, and an additional profit of £50,000 was made during the next four months. By September, 1848, dividends had been distributed amongst the shareholders to the value of £123,000. A strike amongst the workmen led to the suspension of operations for six months, but on the resumption of work increased vigor was displayed in the development of this important property, owing partly to the fact that, during the cessation of operations, smelting works were erected in the neighborhood of the mine by the Patent

Copper Company—now the English and Australian Copper Company. This enabled ores of lower quality to be treated. During the winter of 1849, the first copper was made, and some idea of the extent of the operations of the company, and its important influence upon the province at that time, may be gained from the fact that, in the year 1851, 1,013 men and boys were employed on the mines, and the ore brought to grass amounted in value to £450,000. Whilst in the height of its prosperity, however, the mine received a severe check, arising from the discovery of gold in Victoria, towards the end of 1851. These rich discoveries tempted to Victoria nearly the whole manhood of the colony. By this extraordinary withdrawal of labor nearly every industry was paralysed, and the Burra Burra Mine was practically closed for some years, it being impossible to obtain miners. On October 1st, 1852, the pumping engines ceased to work, and they remained silent until January, 1855, when pumping was resumed, the mine was cleared of water to the 40 fathom level, and the deep workings were again opened up, a large importation of Cornish miners having been sanctioned by the Emigration Commissioners, upon the advice of the Governor, Sir H. E. F. Young. For ten years the mine yielded good results, but in 1865, the large reduction in the price of copper seriously affected the property, and swept away the profits derived from it. Nevertheless, the mine was worked until September, 1877, when operations were stopped.

During the twenty-nine and a half years of work, the actual expenditure by the company amounted to £2,241,167 for wages, timber, cartage, store, superintendence, machinery, buildings, and business charges, only £137,000 of this amount having been expended outside the province. This does not include the incidental expenditure arising from the erection and carrying on of the smelting works. It will be of interest to state that the output of the mine during the twenty-nine and a half years of the company's operation amounted to 234,648 tons of copper ore, of an average of 22 per cent., equal to 51,622 tons of copper, which, at the average price of copper, amounted to a money value of £4,749,224! The actual profits made by the company amounted to £826,585 11s. 11d. It is impossible to exaggerate the influence which this important mining property has had upon the well-being of South Australia. Whilst it yielded handsome



**Kapunda Mines.**

returns to the shareholders, it also gave tone and confidence to the community at a time when depression, and its paralysing despondency, had settled down upon the people, and consequently the Burra Burra Mine will ever be intimately associated with the industrial and commercial history of South Australia.

### Yorke's Peninsula Mines.

It is an interesting circumstance, also, that the discovery of the rich copper mines on Yorke's Peninsula—the well-known Wallaroo and Moonta Mines—occurred at a time of serious commercial depression in South Australia, and the enormous production of mineral wealth enriched many colonists, and greatly revived the province. It was in the year 1860—a quarter of a century ago—that a shepherd, named James Boor, in the employ of Mr. (now Sir) Walter Watson Hughes, on his sheep run at Yorke's Peninsula discovered some specimens, which, upon analysis, proved to be rich in copper. Mineral leases of the land were secured, and exploration for minerals was enterprisingly prosecuted. A few gentlemen formed a company, which soon worked the far-famed Wallaroo Mine, the richness of which may be judged from the following figures:—The ore raised between March, 1860, and December, 1884, amounted to 428,333 tons gross weight, of a net value of £1,970,553, and represented a production of copper of 41,025 tons, of an estimated net value in the colony of £2,873,121. The mine gave employment—when in full work—to a very large staff, there being at one time as many as 1,003 men and boys engaged on the workings. The dividends distributed amongst the shareholders from the mines and smelting works combined have amounted to £372,256.

In the following year (1861) another splendid discovery was made by a shepherd named Ryan, also in the employ of Mr. Hughes, of the Moonta Mine, which has outstripped the Wallaroo Mine in productiveness, and was then opened up. The Moonta is only a few miles from the Wallaroo Mine, and both mines are situated within a few miles of the sea coast. From the opening of the Moonta Mine, in 1861, until February 28th, 1885, the total quantity of ore raised amounted to 447,969 tons (gross weight) of 21cwts., of a value in the colony of £4,468,124, representing a total

production of refined copper of 85,114 tons, the value of which in the colony may be approximately stated at £5,879,226. To secure these results, the employment of a very large staff of workers was necessary. The maximum number of hands employed at any one time was in the year 1877, when the number employed reached 1,687 men and boys; but the average number employed when in full work has been about 1,250. The total working expenses to the above date have amounted to £3,178,336. For many years the mine paid large dividends with the most gratifying regularity, and as large a sum as £1,072,000 has been distributed out of profits amongst shareholders.

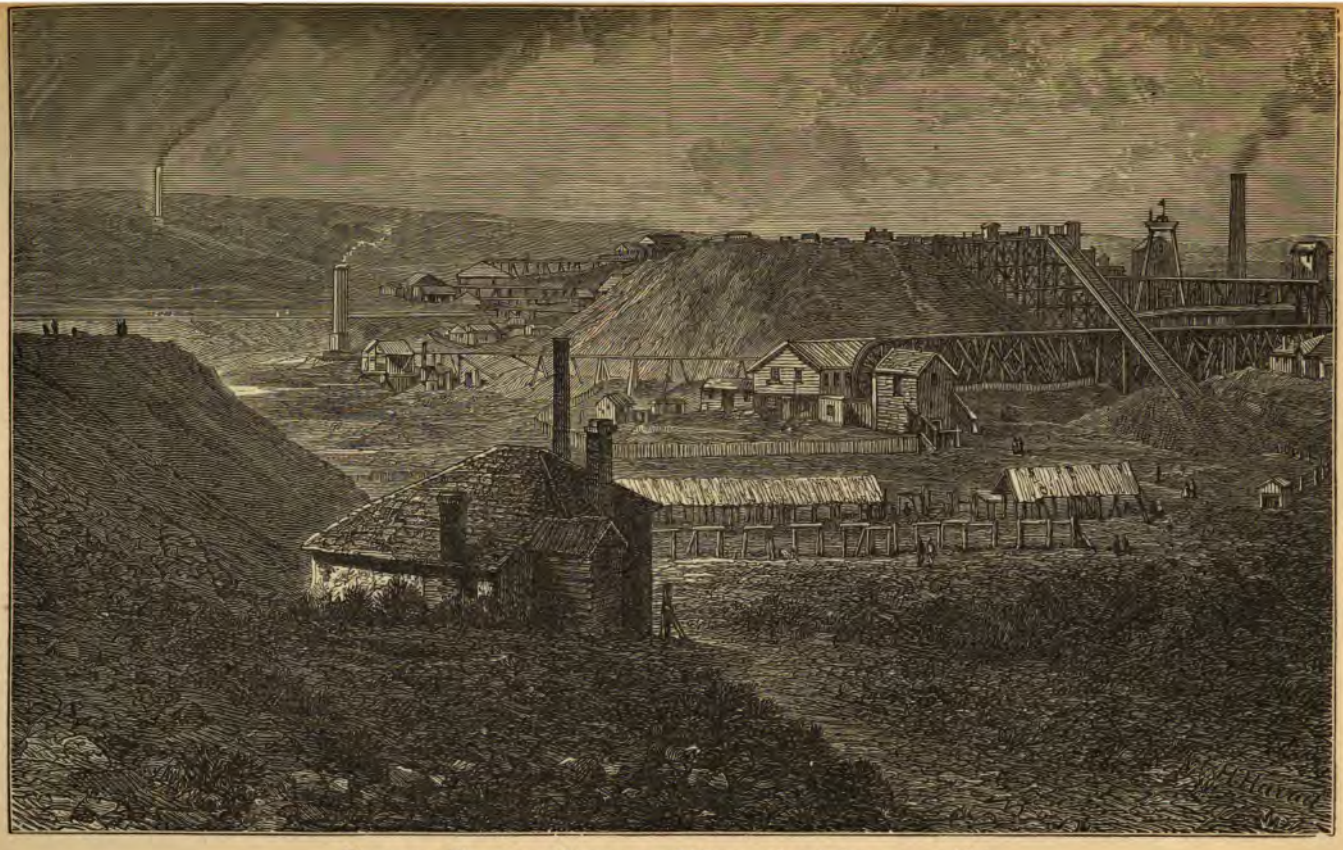
The Wallaroo Company erected—out of profits—smelting works at Port Wallaroo, which have since grown to very large dimensions, in addition to the erection of similar works at Newcastle, in New South Wales, whence the company draws its stock of fuel from the coal mines there. In this way freight is saved—the colliers taking the ore one way, and returning with coals.

The success which attended these companies greatly stimulated mining speculation in the neighborhood, and for some time a mining mania, with its concomitant results of disappointment and disaster, ensued. A large amount of money was expended in mine workings surrounding the Moonta and Wallaroo properties, but—with one of two exceptions—without remunerative results.

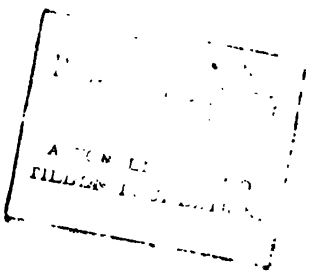
### Hamley Mine.

The Hamley Mine, situated near the Moonta, has been successfully worked. Its output has been 38,182 tons of copper ore, representing 4,071 tons of copper, of the value of £324,195. Its staff of men and boys has numbered from 220 to 250, but at the present time only about seventy-five persons are employed. The wages paid since it was opened in July, 1868, have amounted to £276,614. The Hamley has been a successful mine, and has distributed an amount of £49,799 in dividends amongst the shareholders.

As a natural result of this enormous development of mineral wealth, large and prosperous towns sprung up in the neighbourhood. In addition to the mining townships, which consist of huts and cottages for the miners and their families, built upon lease-



Burra Burra Copper Mine (looking south).



hold land, there have been established the towns of Moonta, Kadina, and Wallaroo, which have assumed considerable dimensions. Large public and private buildings have been erected, and altogether an immense amount of capital has been invested there. Unfortunately some of the mines have had to succumb to the low prices of copper, and even the Moonta and Wallaroo mines have had largely to shorten hands, and restrict their working. These circumstances have thrown many persons out of employment, and they have had to seek work elsewhere in the province, or leave the colony. The decline of the mining industry has, of course, seriously affected these neighborhoods, but the hope may be reasonably entertained that, when the copper market revives, prosperity will return, for the mineral treasures of the neighborhood have not been exhausted.

### Other Copper Mines.

The great success of the Wallaroo and Moonta mines caused a great *furore*, so that considerable quantities of land surrounding these properties were laid out as mineral claims. Many of these "claims" were merely speculative, but others were worked with praiseworthy enterprise and patience, though with ill-success. Amongst these mines may be mentioned the New Cornwall, Matta Matta, Kurilla, Duryea, Yelta, Karkarilla, Paramatta, and others. All these were upon Yorke's Peninsula.

Other portions of the colony have been found to be rich in cupreous wealth—particularly the country north of Port Augusta, where several copper mines were opened out, the more important mines in that district being the Blinman, Yudnamutana, Sliding Rock, &c.

In the Southern District the most important mine is the Bremer Mine, situated between thirty and forty miles from Adelaide. This was discovered in 1850, and for several years was worked with some amount of success. It, however, has had to succumb to circumstances.

### Silver and Gold Mining.

Copper mining has undoubtedly been the most prominent feature of mineral enterprise in South Australia, and the output of copper has been very large. Mining operations have not, however, been confined solely to copper. A considerable amount of money

and labor has been expended in mining for gold, silver, silver lead, and other metals. Gold seems to be extensively distributed throughout the colony, and there have occasionally been rushes to alluvial goldfields, which have turned out more or less successful. Some Companies are engaged in sinking upon auriferous reefs, principally in the neighborhood of Woodside, about twenty-five miles to the east of Adelaide, with satisfactory results, and the Government Geologist is now making a systematic exploration of the reefy country at Echunga, where gold in the alluvium has been frequently found. Years ago silver-lead mines were opened at Talisker, near Cape Jervis, and at Almanda, near Clarendon, in the ranges south of Adelaide, but the workings there have been abandoned for a considerable time. The Northern Territory is rich in gold deposits, and a large number of persons, chiefly Chinese, is engaged in the search for the precious metal, both on alluvial diggings and at the reefs. The only thing which has retarded the development of these deposits has been the high rate of carriage and stores, but this will be remedied by the construction of a railway from Palmerston to Pine Creek, the centre of the gold district.

## *Chapter IX.—THE CLIMATE OF SOUTH AUSTRALIA.*

SOUTH AUSTRALIA embraces nearly 24 parallels of latitude, and therefore it need hardly be said that no single word can accurately describe what the climate over so vast an area is. Generally speaking, the climate of the southern part of the province may be termed "dry," whilst that of the Northern Territory may be called "semi-tropical." Naturally, in a country so dependent upon rainfall for its supplies of water, the meteorological conditions are a subject of much interest and importance, as the staples of produce—wool and wheat—depend so largely upon them. For many years the late Sir G. S. Kingston, Speaker, kept a record of the rainfall at Adelaide, and his observations have proved of great value in tracing the effects of rainfall on the produce from the pastoral and farming districts over a long term of years. For more than twenty-five years observations have been recorded in Adelaide by the Government Astronomer (Mr. Charles Todd, C.M.G.), who has now organised a very complete system of meteorological observations in the colony, and, in conjunction with astronomers in the other colonies, is enabled daily to display in the hall of the Post Office a complete weather chart for all Australasia. Elaborate meteorological observations are kept at the Adelaide Observatory, and from these some general deductions with reference to the climatology of the province may be drawn. For meteorological purposes the astronomer divides the year into five summer months (November, December, January, February, and March), and seven winter and spring months (April, May, June, July, August, September, and October). At the Adelaide Observatory the mean rainfall for twenty-six years was, in the summer months, 4·557, and in the winter months, 15·700, or an average of 20¼in., whilst the mean annual rainfall at Adelaide for forty-four years was 21·134. At Mount Lofty, on the range of hills behind the city, the fall is heavier, the records showing that over a term of twenty-four years the average in the summer months was 7·889, and in the winter and spring, 34·286. At Mount Gambier, near the southernmost boundary of the colony,

the average for twenty-two years was 7·639 in the summer, and 23·643 in the winter and spring. At Port Lincoln, on the western shores of Spencer's Gulf, the average over fourteen years was 3·654 in the summer, and 16·487 in the winter and spring. At Port Augusta, at the head of Spencer's Gulf, the average over twenty-three years was 3·127 in the summer, and 5·685 in the winter and spring; and at Angorichina and Blinman, still further north, the average over seventeen years was 5·508 in the summer, and 8·822 in the winter and spring.

In the Northern Territory the wet months are October, November, December, January, February, March, and April, the remaining months being the dry season. At Port Darwin the average rainfall over eleven years was 58·849 during the wet months, and during the remaining five months there was practically no fall of rain at all. At Alice Springs, in Central Australia, the mean rainfall during the same eleven years was 11·4 inches, and the rainfall was distributed more regularly throughout the year than at the more northern stations.

In the Observer's latest report for the year 1882 the following remarks are made:—"The foregoing tables show that we cannot, "as a rule, expect a good harvest without copious rains in the "period May to October. The total rainfall for the year may, "however, be comparatively small, and yet the harvest good, as "in 1864, when it only averaged 18·83 inches (taking the whole "of the agricultural district), provided the downpour is ample in "the six months just specified. On the other hand the total "rainfall may be large, but the yield small, if the winter rainfall "is deficient, or if heavy rains and adverse atmospheric condi-"tions occur late in October, November, and December, as was "the case in 1871, when the rainfall averaged 23·55 inches, and "the yield was only 5 bushels 45lbs."

The approximate mean reading of the barometer at Adelaide during twenty-seven years (1856-1882) was 30·054; the highest reading during that period being 30·727, and the lowest 29·234. The mean temperature at Adelaide during the same period (1856-1882) was 63·2; the highest reading of the thermometer being 116·3, and the lowest reading 32·3. With reference to the general meteorological conditions of the colony the following remarks by

Mr. W. Ernest Cooke, B.A., Assistant Observer, will be of interest :—" It is rather peculiar how widespread is the belief that " we get most of our disturbances from the eastward or northward. " I suppose I need hardly point out that over 90 per cent. at all " events come from the westward or south-west, and are almost " invariably noted off the Leeuwin, then Esperance Bay, Eucla, " and Streaky Bay before we experience them. A casual glance " at the barometric curve sheet along the south coast for each " month will readily convince anybody of this. The rainfall that " usually accompanies a barometric depression cannot be depended " on in connection with those that are continually skirting our " south coast further north than the head of Spencer's Gulf, and " the pluvial statistics of the interior regions show that they " are sometimes visited by rain storms of great severity, and " then again they will scarcely have a drop for months. " I may as well mention that barometric depressions very " rarely pass to the north of Adelaide. They seem as a rule " to prefer the Southern Ocean, but cases have sometimes oc- " cured when they have been traced overland from the north- " western coast of Western Australia to Victoria. This sort of " thing usually occurs in summer, if at all; in fact, I cannot call " to mind a single instance of a barometric depression passing to " the north of Adelaide in winter. Occasionally a depression will " travel some distance into Queensland from the north-east coast, " and our northern stations will then be blessed with copious rains. " One remarkable fact I have noticed, viz., that our climate seems " be getting perceptibly colder. I have not had time to thoroughly " examine this, but am pretty well convinced that we do not at " present suffer from the extreme heat that was experienced in " olden times."

Burra Burra Copper Mine (looking north).

# *Chapter X.—THE PROVIDENCE OF THE PEOPLE.*

## I.—BUILDING SOCIETIES.

By Mr. H. D. Gell, J.P.

Soon after the proclamation of the Colony, now nearly fifty years since, Building Societies were introduced. They were then but little understood either in England or elsewhere, and want of experience, unsound principles, and the many difficulties inseparably connected with the establishment of a new Colony, rendered the first efforts of little or no permanent benefit either to the colonists or the shareholders. During this early period of our history, the desire for obtaining wealth rapidly was so great, that the elements of gambling were introduced under the guise and rules of Building Societies. Owing to the failures and dissatisfaction following such unwise methods, the inevitable results of disaster, mistrust, and unpopularity were speedily attained. Owing also to the great exodus of the population, and unusually hard times that existed for several years—from 1849 to 1853, or until the gold from Victoria became circulated in South Australia—the people had neither the means nor the inclination to promote and support such societies. As the people returned from the Victorian goldfields, bringing with them the wealth which they had gained in the neighboring colony, their attention was again drawn towards Building Societies; and several large and flourishing ones were founded, and availed of, not alone by the working classes, but largely by speculators, merchants, tradespeople, and capitalists. Founded upon principles of justice and economy, freed from the blots apparent upon earlier societies, their progress and development was astounding, considering especially the limited population and the expense and difficulties attending settlement in a new home. For many years, or until about 1860, the societies were those known as the "terminating," and they effected great good by inducing habits of thrift and carefulness—characteristics that are too often wanting in new settlements. Although these societies did good work, there were

discovered features in the working that were considered hurtful; and waste was necessitated, owing to the frequent winding-up of matured societies and the starting of others to take their place. Not only so, but many would be debarred from membership owing to the fact that shares were dated from a given time; and two or more years after the formation of the society a new member would have to pay not only the whole of the back subscriptions, but a considerable fine also, to entitle him to profits. Borrowers, excepting those commencing early in the history of the society, would also be subject to great difficulties.

About this time (1860) the advantages afforded by the permanent principle became freely recognised, and societies on such a basis were established, and were much favored by the public. In a new colony the scarcity of money is much felt, and rates of interest rule high; hence, the premiums obtained for the money which would be submitted to public competition monthly were very high, and vastly increased the interest to the borrower. For many years these premiums ranged from £10 to £35 per £100 share, and the borrower would thus pay from 12 to 20 per cent. for his money. But even at these high rates, the vast improvement in the value of real property left a handsome margin to the borrower; and many of our now wealthy colonists have to thank Building Societies for the means thus afforded them of obtaining funds to invest in landed property. Of late years these premiums have become nominal, and with many societies they have ceased altogether; the cheapening of money and competing financial organizations rendering the reduction imperative to secure business.

The whole of the societies in South Australia are framed upon the mutual principle, or the division equally, of all profits to borrowers and investors. Some departures from this equitable system have speedily ended in disaster and dissatisfaction.

The bulk of the societies conduct business on the old and well-known and approved lines of £100 shares, issued for investment, at the weekly rate of 4s. payable monthly; the borrower paying double rates, or 8s. per week. The investor is credited each half year with his subscription and the ascertained profit, and when these combined, reach the amount of his share or portion of a share, it is termed matured and paid out. So with the borrower, his total

payments and profit are credited, he being debited with the principal sum and interest or rent, as it accrues each half year, so that after a given time, equal to that of an investing share of the same age and description, the borrowers' share is matured and extinguished. Advances are made not only upon freehold and leasehold property, which is carefully inspected as regards value and title, but also upon the invested shares as partly paid up. This has been found a great assistance and advantage to shareholders, as such a course prevents the loss which would otherwise arise from withdrawing shares.

All Societies are managed by a Board of Directors, with a secretary and other officers, usually including a solicitor, and, as a rule, good and capable men are selected for the various positions. One society only issues stock or permanent shares; these are of a value of £1 each, and having only recently commenced this issue, it cannot be ascertained what success will attend the experiment, or in what manner it will affect the general investor. Many societies now work to some extent with deposit money, which can be readily obtained upon the deposit receipt of the society; and the rates of interest thereon paid being considerably less than bank overdraft rate, a large saving is effected, where and when the money can be profitably invested.

Until 1881, the Act under which societies were established was that known as the "Benefit Building Societies Act of 1850." It was remarkably complete as an Act, and few difficulties or lawsuits arose. Its objectionable feature was the trustee clause, causing delay, cost, and difficulty both to the society and the individual shareholder; nor did it appear that any protection was afforded by the office of trustee to the shareholders, as excepting in respect to such moneys as came directly into their hands, they were not responsible to the society; nor were they in respect to the securities accepted or released. As no money came into the hands of the trustees, their position and responsibility was nominal.

After thirty-one years of experience under the said Act, in 1881 the "Building Societies Act" was passed; based upon and almost a reprint of the English Act of 1874. Under its provisions the societies are freed from trusteeship and become incorporated institutions, also affording far wider scope to the transactions of

societies; it validates the obtaining of money from others than shareholders, in the form of deposits, overdrafts, &c., also the lending of money to others than shareholders. It makes provision for the purchase of property for the official purposes of the society only. It expressly forbids the investment of the funds in the purchase of property (a most wise provision). Money can only be invested by way of mortgage or deposit; hence a society cannot acquire landed property, as the right of foreclosure is taken away; and the position the society can assume is that of mortgagee only. This is looked upon as a very proper safeguard to shareholders, making it impossible for the directors to dabble in speculative investments that would tie up the funds of the society for an indefinite period. Under the Act of 1881 it was made optional for existing societies to come under its provisions, but imperative for all societies subsequently formed to do so; and, so far, all but two have availed themselves of the privileges of the new Act.

The great bulk of the business of Building Societies is done in the City of Adelaide, the country and suburban societies only contributing about one-eighth of the whole. This is partly owing to the fact that some of the Adelaide societies have branches or agencies in several of the important country towns; but the principal cause is that few of the country towns are sufficiently large to support with success or advantage a local society. There are in Adelaide eight societies; in the suburbs and country, fourteen. The Adelaide balance-sheets have been carefully investigated, and aggregate results compiled therefrom. From information obtainable there may be added to those figures one-eighth for country and suburban societies, the result being as follows:—Assets, £379,346; liabilities, £364,397; average annual income, £332,887; gross annual profit, £51,871; net annual profit, £36,522; annual amount lent on mortgage, £101,194; annual amount paid to matured worked-out investing shares, £158,955. The average rate of profit is 7⅛ per cent. per annum, the lowest being 1 per cent., the highest 9⅛ per cent. per annum. The percentage of working expenses in respect to the total receipts, excepting deposits, overdrafts, and redemptions, is an average of 4¾ per cent. on such receipts; the rates ranging with the different societies from 3¼ per cent. to 12 per cent. In respect to the profits, the

percentage of working expenses averages 30 per cent., but great differences exist in the rates of the different societies, the lowest being 14 per cent., the highest 50 per cent., or one-half the profit. It is noticeable that the older and larger the society, the percentage of cost of working is correspondingly reduced. The figures above quoted speak for themselves, and point to the great benefits and improvement such institutions as Building Societies are effecting. It will be seen at once that the annual income is equal to about £1 per head of the whole population; the assets show a like result, the annual net profits being 2s. per head, and annual amount paid for worked-out shares 10s. per head.

## II.—FRIENDLY SOCIETIES.

By Mr. A. H. Beyer, General Secretary M.U.I.O.O.F.

The institution of Friendly and Benefit Societies dates back to the very early days of the Colony. There are branches or followers of most of the leading English societies, and some new ones. They are governed generally by the Friendly Societies Act of 1852, similar to the law prevailing in England. But in South Australia the Independent Order of Oddfellows, Manchester Unity, has an Act of Incorporation of its own. In other respects also, this society takes altogether a leading position, being by far the largest and most thoroughly organised. Its Sick and Funeral Funds in 1885 amounted to £165,027, while for the whole world the Order totalled £5,367,089. Its number of members here was 11,829, whilst the whole Order numbers 593,850. The members of the Friendly Societies are drawn from all classes of the community, from the Judges downwards; although, of course, the larger number consist of tradesmen, mechanics, and artisans. In almost every country town and village there is a branch of one or other of the societies. The branches elect their own officers and manage their own affairs, generally doing it in an economical way. In the Manchester Unity the balance-sheets are sent each half-year to the head office, and carefully checked. This and other precautions of a similar nature, to regulate and control the contributions, ought to be enforced by a general enactment. Several attempts have been made to secure legislation in this direction, but, so far, without result. In some cases there is no doubt the

funds are insufficient to meet fairly all the demands that will be made upon them. It would be a good thing for the societies if some action were taken like the valuation that was made by the Treasury of England in 1880, because there is no doubt that where the deficiencies were shown, the people would be found ready in South Australia, as they were in England, to contribute sufficient in the course of a few years to put their affairs upon a sound footing. The temptation is, whilst there are sufficient funds to meet all engagements that have arisen, to lose sight of the equally certain liabilities which the advancing age of the members is sure to bring. An official tabulation and control would therefore be highly beneficial to all concerned. The benefit of medical attendance is often obtained in the country districts owing in large measure to the existence of the Friendly Societies, thus giving a nucleus without which the inhabitants would be unable to secure the boon. Some of the societies are established upon strict temperance principles; and whilst a large number hold their meetings at hotels, as the best or only places available, the proceedings are generally conducted with good order. A few societies have erected rooms for their own use. One or two of them have halls and offices of quite substantial character. The latest return published by the Government Statist shows the following numbers of members and value of assets of all the societies in South Australia:—

| Name of Society. | Number of Members. | Total Assets. | Value of assets per Member. |
|---|---|---|---|
| 1882, Dec. 31st | | £ s. d. | £ s. d. |
| Independent Order of Oddfellows, Manchester Unity | 11,462 | 151,633 6 5 | 13 4 7 |
| Rechabites, Salford Unity, No. 81 | 1,758 | 18,846 11 4 | 10 14 5 |
| Rechabites, Salford Unity, No. 83 | 1,649 | 15,586 4 2 | 9 9 0 |
| Grand United Order of Oddfellows | 1,935 | 15,631 19 3 | 8 1 7 |
| Foresters | 5,877 | 46,208 18 1 | 7 17 3 |
| Druids | 991 | 7,036 3 4 | 7 2 0 |
| Sons of Temperance | 481 | 2,723 3 7 | 5 13 3 |
| Independent Order of Oddfellows | 1,851 | 5,521 17 0 | 2 19 8 |
| Cosmopolitan Friendly Benefit Society | 256 | 612 4 4 | 2 7 10 |
| Grand total Friendly Societies | 26,260 | 263,800 7 6 | 10 0 11 |

It is a matter of pride that the Colony contains a society like the Manchester Unity, which has expended during the year

£10,462 15s. 4d. in sick pay, £6,374 10s. 4d. for medical attendance, and £6,294 18s. 8d. in payments to relatives of deceased members, and still has a substantial and increasing reserve fund. The returns of this society are of the most ample and complete kind, and do credit to the secretary, Mr. A. H. Beyer, who has made the business a life study. The funds of this society, during the last year for which returns are made up (1885), show an increase from £157,271 5s. 9d. to £165,027 11s. 7d., being a gain of £7,756 5s. 10d.; and the membership from 11,661 to 11,829, being an increase of 168. The average worth per member is £14 7s.

## III.—SAVINGS BANK.

Few institutions are more conducive to habits of thrift and providence than the Savings Bank, and the Savings Bank Statistics of South Australia are of an exceedingly gratifying character. The bank was started in Adelaide very early in the history of the province. The Savings Bank of South Australia was established in the year 1848, by authority of an Ordinance enacted by the Governor in Council "for the encouragement of frugality, that "persons possessing small sums of money beyond what they require "for the supply of their immediate wants should be afforded an "opportunity of depositing the same, on good security, to accumu- "late, at interest, and to form a provision for themselves and "families." By this Act the management of the affairs of the bank was vested in twelve trustees appointed by the Governor, whose services are honorary. Since that date several enactments have been passed giving necessary powers to the trustees, in view of the expansion of the bank's business, and in 1875 a Consolidated Act was obtained, under which the bank is now worked.

For the first twelve years, the bank was only open once a week for deposits, and once a week for withdrawals. In 1860, however, when the present banking premises in King William-street were erected, the business had considerably increased, so that the bank was open three days in the week for deposits, and one day for withdrawals. A still further expansion of business, however, necessitated additional facilities, and since 1871 the bank has been opened daily for deposits and withdrawals. Deposits are received in sums of from 1s. to £500, but interest is not allowed on more

than £250. The rate of interest varies with the profits that are made, but during the thirty-eight years of the bank's history the rate has averaged 5 per cent., ranging between 1 per cent. as the lowest, and 6 per cent. as the highest.

An important step was taken in the year 1867, when the advantages of local Savings Banks were conferred upon country towns and villages. In that year, with the consent of the Government, agencies of the Adelaide Savings Bank were established at telegraph stations on the English Post Office Savings Bank system, and these have proved so successful that agencies have been established in ninety-six of the chief country towns. The telegraph station masters or mistresses are appointed Savings Bank receivers, and thus country depositors have the opportunity of making their deposits at their own local office without having, as previously, to remit to Adelaide, which was a practical hindrance to the formation of habits of frugality and providence.

The following figures are taken from the Annual Report of the bank for the year ended June 30th, 1885. The amount at the credit of depositors, including interest, was £1,571,283 16s. 11d., an increase for the twelve months of £137,773 18s. Depositors paid in during the year £912,181 3s. 9d., and withdrew £844,122 18s. 10d. The amount received in the year ended June 30th, 1884, was £794,036 17s. 9d., and the amount withdrawn was £933,229 14s. 2d., making an increase for the year 1885 of £118,144 6s., against a decrease on the previous year of £89,106 15s. 4d. The rate of interest for the year was 5 per cent., and there was added to depositors' accounts, as interest, a sum of £69,715 13s. 1d. The number of depositors is 53,164—one-sixth of the population of the colony, or say about sixteen in every 100 persons. During the past year 9,838 accounts were opened, and 5,911 were closed, showing an increase of 3,927. The relative prosperity of country and city depositors is shown clearly by these statistics. At the Adelaide office, the withdrawals—necessitated largely by the period of severe depression through which the city has been passing—exceeded the deposits by £18,791 10s. 11d., while at the country agencies the deposits were £86,849 15s. 10d. in excess of withdrawals. The occurrence of a good season, and a correspondingly bountiful

harvest, explains the interesting results recorded by the agencies. The expenses of management amount to a trifle over ½ per cent. viz., 10s. 7¼d. per £100. The funds of the bank are invested in Government and Corporation securities, mortgage loans, and bank deposits. The reserve fund amounts to £30,000.

Attention is directed to a tabular statement of the operations of the bank since its establishment, which is published in the Appendix hereto. The growth of this institution in South Australia is there shown in an interesting manner. It will be seen that the progress of the bank during the last ten years has been very rapid, the number of accounts having increased from 22,662 in 1875 to 53,164 in 1885, and the deposits from £816,827 to £1,571,283; and, estimating the population in 1875 at 213,000, and in 1885 at 319,000, the number of depositors in every 100 persons has increased from 11 to 16, a higher ratio than that of any of the Australasian Colonies.

## IV.—LIFE ASSURANCE.

This means of providence has been very largely availed of in South Australia, as will be seen from the subjoined returns. Some of the wealthiest English companies initiated the business many years ago, and have for a long while continued to receive a considerable sum in yearly premiums, besides meeting payments falling due to colonists by deaths in the ordinary course. But the principle of mutual assurance since its introduction has secured such popularity that the companies carrying on upon this basis have obtained almost the whole of the new business. There is in South Australia one purely local company—the Adelaide Life Assurance and Guarantee Company—which has been established for many years, but has not made any special endeavor to extend its operations in late years. It is not on the mutual principle. There is another company—the South Australian Life Assurance—of local origin, which seeks to gather business in all the colonies, making Adelaide its head-quarters. Then there is the Australian Mutual Provident Society, which is almost regarded as a local institution, having had a prosperous branch here for many years, and assuring at the present time by far the largest amount of any office, colonial or foreign. There are

several other mutual companies having their head-quarters in one or other of the neighboring colonies.

The sums assured are—In colonial offices, £4,631,268; in English offices (estimated), £500,000; making a total of upwards of five million pounds. These companies may be reckoned as very nearly akin to Savings Banks, and the annual payments of the people towards them may be computed at three per cent. of the sum assured, equal to £153,000 a year. The assets are safely invested for the most part in mortgages of real estate or in Government bonds.

| | Number of Policies. | Amount Assured. | Assets in the Colony. |
|---|---|---|---|
| | | £ | £ |
| COLONIAL OFFICES. | | | |
| Colonial Mutual Life Assurance Company .. | 2,218 | 542,150 | 48,082 |
| Mutual Life Association of Australasia .... | 554 | 131,500 | 16,724 |
| Mutual Assurance Society of Victoria ..... | 2,431 | 600,130 | 60,782 |
| National Mutual Life Association of Australasia ..... | 2,330 | 552,013 | 66,000 |
| Australian Temperance and General Mutual Life Assurance Company ..... | 388 | 71,150 | 9,384 |
| Adelaide Life Assurance Company ..... | 225 | 80,850 | 60,022 |
| Australian Mutual Provident Society ..... | 6,503 | 2,111,711 | 426,689 |
| Australian Widows ..... | 1,591 | 379,364 | 33,904 |
| South Australian ..... | 782 | 162,400 | 12,267 |
| | 17,022 | 4,631,268 | 733,854 |
| ENGLISH OFFICES. | | | |
| City of Glasgow ..... | 61 | 30,714 | — |
| Australian Alliance ..... | 65 | 28,692 | — |
| Queen ..... | — | 16,750 | — |
| Liverpool, London, and Globe ..... | — | 25,500 | — |
| Eagle..... ..... | 87 | 52,350 | — |
| The Northern ..... | 153 | 76,640 | — |
| Church of England ..... | | | |
| Royal ..... | Estimated | 269,354 | — |
| Victoria..... | | | |
| Standard ..... | | | |
| | — | 500,000 | — |
| Total Colonial and English..... | — | £5,131,268 | — |

Oullina Gap, near Adelaide.

K
LIBRARY
LENOX AND
TILDEN FOUNDATIONS

# APPENDIX.

*Return of the Number of Depositors, Amount Deposited, &c., in the Savings Bank of South Australia during each Year from* 1848 *to June* 30*th*, 1885, *inclusive.*

| Year. | Number of New Accounts Opened during year. | Number of Depositors at the close of each year. | Increase of Depositors over previous year. | Amount deposited in each year. | Amount withdrawn in each year. |
|---|---|---|---|---|---|
| | | | | £ s. d. | £ s. d. |
| 1848 .... | 293 | 214 | *Nil.* | 6,473 18 5 | 1,180 14 10 |
| 1849 .... | 476 | 421 | 207 | 6,753 1 0 | 4,329 8 6 |
| 1850 .... | 599 | 672 | 251 | 10,255 6 6 | 6,808 1 6 |
| 1851 .... | 705 | 732 | 60 | 15,224 2 6 | 12,761 18 5 |
| 1852 .... | 550 | 837 | 105 | 27,619 6 4 | 11,081 1 1 |
| 1853 .... | 804 | 1,263 | 426 | 53,053 9 2 | 30,312 5 5 |
| 1854 .... | 521 | 1,255 | *Decrease* 8 | 29,859 14 11 | 33,917 19 7 |
| 1855 .... | 529 | 1,322 | 67 | 27,753 6 11 | 31,671 6 2 |
| 1856 .... | 600 | 1,469 | 147 | 29,328 17 3 | 27,142 8 7 |
| 1857 .... | 733 | 1,775 | 306 | 37,534 3 2 | 28,254 18 9 |
| 1858 .... | 629 | 1,929 | 155 | 35,138 11 7 | 39,032 15 6 |
| 1859 .... | 706 | 2,200 | 271 | 39,430 11 10 | 34,906 11 9 |
| 1860 .... | 893 | 2,567 | 367 | 52,293 3 0 | 38,168 1 4 |
| 1861 .... | 1,081 | 3,248 | 681 | 65,373 6 8 | 37,627 3 2 |
| 1862 .... | 1,264 | 3,877 | 629 | 79,482 3 6 | 54,495 19 1 |
| 1863 .... | 1,440 | 4,711 | 834 | 91,783 11 1 | 63,393 15 0 |
| 1864 .... | 1,806 | 5,843 | 1,132 | 120,924 18 4 | 87,731 0 7 |
| 1865 .... | 2,333 | 7,076 | 1,233 | 131,115 13 2 | 115,751 16 5 |
| 1866 .... | 2,135 | 7,679 | 603 | 124,427 8 10 | 147,524 8 1 |
| 1867 .... | 2,321 | 8,683 | 1,004 | 145,207 14 6 | 133,848 7 11 |
| 1868 .... | 2,784 | 9,659 | 976 | 170,566 19 8 | 147,660 17 10 |
| 1869 .... | 3,485 | 11,407 | 1,748 | 211,826 0 8 | 161,682 10 2 |
| 1870 .... | 3,112 | 12,569 | 1,162 | 203,620 10 3 | 182,206 17 9 |
| 1871 .... | 3,444 | 14,270 | 1,701 | 237,053 19 8 | 191,161 9 9 |
| 1872 .... | 3,676 | 15,955 | 1,685 | 294,693 9 3 | 232,119 16 10 |
| 1873 .... | 4,731 | 18,604 | 2,649 | 380,241 6 1 | 272,621 6 4 |
| 1874 .... | 4,530 | 20,600 | 1,996 | 380,230 8 0 | 366,447 8 8 |
| 1875 .... | 4,765 | 22,662 | 2,062 | 419,914 4 8 | 393,686 16 0 |
| 1876 .... | 2,905 | 23,924 | 1,262 | 265,182 9 11 | 250,673 15 5 |
| 1877 .... | 6,191 | 26,320 | 2,396 | 548,607 9 3 | 485,721 11 11 |
| 1878 .... | 6,872 | 29,088 | 2,768 | 595,256 19 6 | 600,222 5 2 |
| 1879 .... | 7,246 | 31,394 | 2,306 | 583,209 11 11 | 629,225 13 11 |
| 1880 .... | 7,456 | 34,287 | 2,926 | 604,637 0 7 | 617,021 8 7 |
| 1881 .... | 8,481 | 37,742 | 3,455 | 823,259 8 2 | 662,433 8 2 |
| 1882 .... | 10,029 | 42,384 | 4,642 | 1,044 438 12 2 | 822,633 12 7 |
| 1883 .... | 9,925 | 46,388 | 4,004 | 878,213 1 5 | 971,228 5 10 |
| 1884 .... | 9,657 | 49,237 | 2,849 | 794,036 17 9 | 933,229 14 2 |
| 1885 .... | 9,838 | 53,164 | 3,927 | 912,181 3 9 | 844,122 18 10 |

*Return of the Number of Depositors, &c., in the Savings Bank*—continued.

| Year. | Amount of Depositors' Balances at the close of each year, including Interest. | | | Average Amount at Credit of each Depositor. | | | Rate of Interest allowed to Depositors | Amount of Reserve Fund at the close of each year. | | | Total Funds at the close of each year. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | £ | s. | d. | £ | s. | d. | ℔ cent. | £ | s. | d. | £ | s. | d. |
| 1848 .. | 5,313 | 9 | 2 | 24 | 16 | 7 | 3 | 7 | 18 | 3 | 5,414 | 8 | 4 |
| 1849 .. | 7,854 | 10 | 5 | 18 | 13 | 1 | 5 | 95 | 15 | 2 | 7,950 | 5 | 7 |
| 1850 .. | 11,538 | 18 | 10 | 17 | 3 | 5 | 5 | 233 | 3 | 1 | 11,772 | 1 | 11 |
| 1851 .. | 14,340 | 16 | 10 | 19 | 11 | 9 | 5 | 444 | 7 | 5 | 14,785 | 4 | 3 |
| 1852 .. | 31,323 | 2 | 0 | 37 | 8 | 5 | 5 | 801 | 4 | 1 | 32,124 | 6 | 1 |
| 1853 .. | 54,355 | 5 | 0 | 43 | 0 | 8 | 1 | 986 | 16 | 7 | 55,342 | 1 | 7 |
| 1854 .. | 51,113 | 13 | 2 | 40 | 14 | 6 | 2½ | 1,398 | 17 | 10 | 52,512 | 11 | 0 |
| 1855 .. | 48,870 | 1 | 5 | 36 | 19 | 4 | 5 | 2,489 | 3 | 8 | 51,359 | 5 | 1 |
| 1856 .. | 52,775 | 7 | 9 | 35 | 18 | 6 | 5 | 4,284 | 18 | 4 | 57,060 | 6 | 1 |
| 1857 .. | 64,668 | 7 | 3 | 36 | 8 | 7 | 5½ | 5,467 | 13 | 4 | 70,136 | 0 | 7 |
| 1858 .. | 63,880 | 14 | 7 | 33 | 2 | 3 | 6 | 6,338 | 15 | 2 | 70,219 | 10 | 0 |
| 1859 .. | 71,895 | 9 | 5 | 32 | 13 | 7 | 6 | 7,550 | 10 | 6 | 79,445 | 19 | 11 |
| 1860 .. | 88,889 | 19 | 4 | 34 | 12 | 6 | 5 | 9,126 | 17 | 9 | 98,016 | 17 | 1 |
| 1861 .. | 121,414 | 15 | 7 | 37 | 7 | 7 | 5 | 10,175 | 8 | 3 | 131,590 | 3 | 10 |
| 1862 .. | 152,663 | 16 | 2 | 39 | 7 | 6 | 5 | 10,842 | 18 | 6 | 163,506 | 14 | 8 |
| 1863 .. | 189,143 | 11 | 9 | 40 | 2 | 11 | 5 | 12,062 | 0 | 8 | 201,205 | 12 | 5 |
| 1864 .. | 231,972 | 6 | 3 | 39 | 14 | 0 | 5 | 13,431 | 7 | 11 | 245,403 | 14 | 2 |
| 1865 .. | 258,693 | 7 | 2 | 36 | 11 | 2 | 5 | 15,378 | 7 | 2 | 274,071 | 14 | 4 |
| 66 .. | 249,329 | 11 | 10 | 32 | 9 | 4 | 6 | 17,370 | 8 | 11 | 266,700 | 0 | 9 |
| 1867 .. | 274,508 | 14 | 7 | 31 | 12 | 3 | 6 | 19,587 | 1 | 10 | 294,095 | 16 | 5 |
| .. | 312,728 | 1 | 6 | 32 | 7 | 6 | 6 | 21,147 | 15 | 8 | 333,875 | 17 | 2 |
| 1868 | 382,284 | 10 | 7 | 33 | 10 | 3 | 6 | 23,002 | 4 | 0 | 405,286 | 14 | 7 |
| 1869 .. | 423,399 | 18 | 8 | 33 | 13 | 8 | 5½ | 25,258 | 6 | 0 | 448,658 | 4 | 8 |
| 1870 .. | 490,844 | 6 | 8 | 34 | 7 | 11 | 5 | 26,155 | 9 | 5 | 516,999 | 16 | 1 |
| 1871 .. | 578,517 | 9 | 9 | 36 | 5 | 2 | 5 | 27,170 | 18 | 10 | 605,688 | 8 | 7 |
| 1872 .. | 709,342 | 17 | 11 | 38 | 2 | 6 | 4 | 27,782 | 10 | 5 | 737,125 | 8 | 4 |
| 1873 .. | 754,600 | 0 | 10 | 36 | 12 | 7 | 4½ | 28,264 | 1 | 8 | 782,864 | 2 | 6 |
| 1874 .. | 816,827 | 12 | 3 | 36 | 0 | 10 | 5 | 28,448 | 8 | 1 | 845,276 | 0 | 4 |
| 1875 .. | 851,332 | 10 | 4 | 35 | 11 | 8 | 5 | 28,448 | 8 | 1 | 879,788 | 11 | 2 |
| 1876 .. | 952,414 | 7 | 3 | 36 | 3 | 8 | 4½ | 28,448 | 8 | 1 | 982,857 | 3 | 11 |
| 1877 .. | 993,720 | 14 | 8 | 34 | 3 | 3 | 5 | 30,000 | 0 | 0 | 1,026,302 | 18 | 0 |
| 1878 .. | 998,670 | 6 | 1 | 31 | 16 | 2 | 5½ | 30,000 | 0 | 0 | 1,032,301 | 10 | 9 |
| 1879 .. | 1,036,957 | 8 | 10 | 30 | 4 | 10 | 5½ | 30,000 | 0 | 0 | 1,071,692 | 3 | 11 |
| 1880 .. | 1,249,467 | 16 | 3 | 33 | 2 | 1 | 5½ | 30,000 | 0 | 0 | 1,288,449 | 12 | 7 |
| 1881 .. | 1,529,641 | 4 | 11 | 36 | 1 | 9 | 4½ | 30,000 | 0 | 0 | 1,568,712 | 1 | 2 |
| 1882 .. | 1,500,248 | 14 | 1 | 32 | 6 | 9 | 4½ | 30,000 | 0 | 0 | 1,544,765 | 5 | 3 |
| 1883 .. | 1,433,509 | 18 | 11 | 29 | 2 | 3 | 5½ | 30,000 | 0 | 0 | 1,475,333 | 8 | 4 |
| 1884 .. | 1,571,283 | 16 | 11 | 29 | 11 | 1 | 5 | 30,000 | 0 | 0 | 1,614,748 | 2 | 3 |
| 1885 .. | | | | | | | | | | | | | |

*Return of the Number of Depositors, &c., in the Savings Bank*—continued.

| Year. | Rents, Salaries, Stationery, and all other expenses incurred each year. | | | Amount lent on Mortgage. | | | Rate of Interest charged on Mortgage Loans. | Amount of Government and Corporation Securities | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | £ | s. | d. | £ | s. | d. | ℔ cent. | £ | s. | d. |
| 1848..... | 108 | 17 | 2 | 3,100 | 0 | 0 | 10 | — | | |
| 1849..... | 203 | 15 | 5 | 4,850 | 0 | 0 | 10 | — | | |
| 1850..... | 200 | 2 | 0 | 7,250 | 0 | 0 | 10 | — | | |
| 1851..... | 289 | 8 | 8 | 10,470 | 0 | 0 | 10 | — | | |
| 1852..... | 263 | 15 | 5 | 8,340 | 0 | 0 | 10 | — | | |
| 1853..... | 538 | 4 | 0 | 11,270 | 0 | 0 | 8 | — | | |
| 1854..... | 573 | 8 | 4 | 32,520 | 0 | 0 | 10 | 11,600 | 0 | 0 |
| 1855..... | 677 | 17 | 8 | 32,970 | 0 | 0 | 10 | 11,600 | 0 | 0 |
| 1856..... | 591 | 16 | 10 | 37,170 | 0 | 0 | 10 | 11,600 | 0 | 0 |
| 1857..... | 694 | 2 | 6 | 44,070 | 0 | 0 | 10 | 11,600 | 0 | 0 |
| 1858..... | 606 | 11 | 8 | 46,020 | 0 | 0 | 10 | 11,600 | 0 | 0 |
| 1859..... | 613 | 7 | 1 | 45,720 | 0 | 0 | 10 | 11,600 | 0 | 0 |
| 1860..... | 732 | 14 | 5 | 46,520 | 0 | 0 | 10 | 17,054 | 0 | 0 |
| 1861..... | 1,545 | 3 | 11 | 85,457 | 17 | 3 | 7½ | 17,054 | 0 | 0 |
| 1862..... | 1,399 | 13 | 0 | 106,362 | 6 | 10 | 7½ | 12,400 | 0 | 0 |
| 1863..... | 1,451 | 14 | 8 | 127,611 | 2 | 5 | 7½ | 11,600 | 0 | 0 |
| 1864..... | 1,748 | 14 | 0 | 138,371 | 9 | 11 | 7½ | 11,600 | 0 | 0 |
| 1865..... | 2,677 | 10 | 2 | 181,895 | 0 | 2 | 7½ | 11,600 | 0 | 0 |
| 1866..... | 2,852 | 18 | 7 | 178,862 | 2 | 6 | 7½ | 11,600 | 0 | 0 |
| 1867..... | 3,402 | 10 | 8 | 193,428 | 0 | 0 | 8 | 25,000 | 0 | 0 |
| 1868..... | 2,873 | 12 | 4 | 187,254 | 15 | 10 | 8 | 25,000 | 0 | 0 |
| 1869..... | 3,492 | 3 | 7 | 233,411 | 6 | 9 | 7 | 25,000 | 0 | 0 |
| 1870..... | 3,550 | 0 | 6 | 295,673 | 4 | 4 | 7 | 80,000 | 0 | 0 |
| 1871..... | 4,262 | 2 | 1 | 299,933 | 9 | 2 | 7 | 141,900 | 0 | 0 |
| 1872..... | 3,512 | 5 | 8 | 192,216 | 12 | 4 | 7 | 198,405 | 19 | 0 |
| 1873..... | 3,383 | 2 | 4 | 156,866 | 0 | 5 | 6 | 307,665 | 19 | 0 |
| 1874..... | 3,719 | 14 | 8 | 186,646 | 17 | 7 | 6 | 316,670 | 9 | 0 |
| 1875..... | 3,894 | 1 | 1 | 239,711 | 11 | 2 | 6 | 291,334 | 12 | 4 |
| 1876..... | 2,398 | 10 | 5 | 244,532 | 14 | 1 | 6 | 297,332 | 8 | 2 |
| 1877..... | 4,711 | 13 | 3 | 317,644 | 2 | 1 | 6 | 295,098 | 14 | 10 |
| 1878..... | 5,263 | 17 | 9 | 483,732 | 7 | 3 | 6 | 295,396 | 1 | 2 |
| 1879..... | 5,467 | 4 | 6 | 495,614 | 14 | 0 | 6 | 295,396 | 1 | 2 |
| 1880..... | 5,662 | 1 | 1 | 510,248 | 2 | 1 | 6 | 319,093 | 10 | 5 |
| 1881..... | 7,458 | 5 | 7 | 580,458 | 13 | 6 | 6 | 322,108 | 18 | 2 |
| 1882..... | 6,406 | 12 | 9 | 512,411 | 1 | 11 | 5½ | 482,391 | 17 | 7 |
| 1883..... | 7,420 | 0 | 4 | 659,457 | | 5 | 5½ & 6 | 604,306 | 8 | 2 |
| 1884..... | 7,880 | 1 | 8 | 635,965 | 0 | 0 | 6 | 604,306 | 8 | 2 |
| 1885..... | 8,562 | 3 | 6 | 689,953 | 5 | 0 | 6 | 599,063 | 18 | 2 |

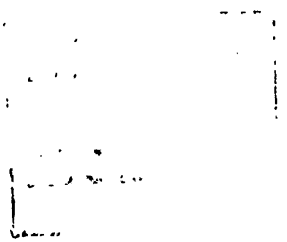
## Chapter XI.—THE REAL PROPERTY ACT.

One of the most important Acts ever passed is the Real Property Act, and South Australia has the proud boast of having initiated a facile system of dealing with land which has been followed by many other countries. The honor of initiating this Act is due to the late Sir R. R. Torrens, formerly Collector of Customs. This measure revolutionised the old system of conveyancing, and substituted for the old and complicated method of conveyance of real estate by deed, a cheap and speedy system of registration of title. As Collector of Customs, Sir R. R. (then Mr.) Torrens, had become familiarised with the laws relating to the transfer of ships, and he conceived the idea of applying the same principle to the transfer of land. The two leading features of the legal reform with which his name is associated were—the conveyance of land by registration, and indefeasibility of title. The proposal of this reform raised the fiercest opposition on the part of the legal profession, but the reform was exceedingly popular, and Mr. Torrens, with great tact, skill, and determination, piloted the Bill through Parliament, and in January, 1858, it was entered upon the Statute Book, and in July of the same year it came into operation. The author of the measure who had carried it through the Legislature, was appointed Registrar-General—the principal officer under the Act—in order that he might successfully inaugurate a system towards the accomplishment of which he had labored so unweariedly, and brought to bear so much intelligence and ability. The Act, which is known as "The Real Property Act," or "Torrens Act," was very soon admitted to be a great success, and the neighboring Colonies were not long before they copied it, and invited Mr. Torrens to initiate the system in those Colonies. Its simplicity, also, has attracted the attention of many eminent jurists in England, America, and elsewhere. The following return, showing the operations under the Act since its inauguration in 1858 to the end of the year 1884, is supplied by the present Registrar-General (Mr. W. B. T. Andrews, J.P.):—

| Year. | Applications. | Transfers. | Mortgages. | Leases | Transfer and Extension of Mortgage. | Discharge of Mortgage. | Power of Attorney. | Registration Abstract. | Caveats. | Encumbrances. | Transfer and Extension of Leases. | Surrender of Leases. | Trusts, &c. | Licences. | Transmissions. | Withdrawal of Caveat. | Assignments Deposited. | Recovery by Lessor. | Order of Court. | Foreclosure, &c. | Writ. | Certificate of Marriage. | Certificate of Death. | Licence Pendens. | Total. | Value of Land Brought under Operation of Act, including Land Grants. £ | s. | d. | Amount Lent on Mortgages. £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| From July 2 to 31, Dec. 1858 | 184 | 54 | 24 | 1 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 263 | 132,500 | 19 | 0 | 5,670 | 0 | 0 |
| Year 1859 | 329 | 190 | 265 | 50 | 3 | 9 | 1 | 2 | 4 | — | — | — | 2 | — | — | — | — | — | — | — | — | — | — | — | 1,355 | 538,340 | 0 | 0 | 53,719 | 2 | 0 |
| " 1860 | 987 | 348 | 530 | 71 | 9 | 48 | 1 | — | 18 | 1 | 4 | 1 | 11 | 2 | — | — | — | — | — | — | — | — | — | — | 2,031 | 508,216 | 0 | 0 | 178,370 | 7 | 10 |
| " 1861 | 747 | 505 | 558 | 155 | 11 | 155 | 1 | — | 14 | 5 | 4 | 4 | 16 | 8 | — | — | — | — | — | — | — | — | — | — | 2,183 | 451,475 | 1 | 0 | 233,424 | 5 | 0 |
| " 1862 | 901 | 745 | 735 | 174 | 26 | 239 | 4 | — | 17 | 1 | 9 | 7 | 8 | 7 | 6 | 10 | 2 | — | — | — | — | — | — | — | 2,891 | 477,502 | 0 | 0 | 213,829 | 12 | 3 |
| " 1863 | 1,060 | 898 | 901 | 227 | 23 | 325 | 9 | — | 34 | 5 | 13 | 24 | 16 | 16 | 22 | 22 | — | 1 | 1 | — | 1 | — | — | — | 3,598 | 505,806 | 0 | 0 | 260,423 | 0 | 1 |
| " 1864 | 1,145 | 1,292 | 959 | 227 | 40 | 493 | 33 | — | 36 | 4 | 17 | 31 | 29 | 16 | 58 | 19 | — | 2 | 1 | 1 | 1 | — | — | — | 4,404 | 623,162 | 0 | 0 | 333,401 | 3 | 1 |
| " 1865 | 1,142 | 1,767 | 1,200 | 290 | 49 | 605 | 22 | — | 34 | 2 | 34 | 37 | 15 | 16 | 53 | 20 | — | — | 1 | — | — | — | — | — | 5,287 | 939,900 | 0 | 0 | 492,158 | 17 | 7 |
| " 1866 | 1,034 | 1,934 | 1,697 | 334 | 66 | 708 | 24 | — | 71 | 5 | 47 | 32 | 19 | 21 | 44 | 22 | — | — | 1 | — | 1 | — | — | — | 6,060 | 779,648 | 0 | 0 | 677,958 | 0 | 0 |
| " 1867 | 817 | 1,703 | 1,700 | 320 | 188 | 848 | 14 | — | 75 | 7 | 39 | 87 | 13 | 34 | 53 | 36 | — | — | 4 | — | 7 | 4 | 11 | 2 | 5,962 | 478,880 | 0 | 0 | 705,543 | 7 | 5 |
| " 1868 | 779 | 1,771 | 1,837 | 296 | 105 | 975 | 21 | — | 45 | 9 | 28 | 56 | 22 | 31 | 79 | 20 | — | — | 6 | 2 | 13 | 9 | 11 | 2 | 6,117 | 518,646 | 0 | 0 | 640,114 | 1 | 6 |
| " 1869 | 812 | 2,025 | 1,835 | 333 | 106 | 1,084 | 15 | — | 56 | 15 | 36 | 63 | 17 | 36 | 82 | 27 | — | — | 12 | — | 11 | 9 | 14 | 1 | 6,589 | 540,442 | 0 | 0 | 766,344 | 6 | 7 |
| " 1870 | 662 | 1,887 | 1,725 | 247 | 141 | 929 | 15 | — | 67 | 13 | 41 | 72 | 22 | 29 | 156 | 38 | — | — | 10 | 6 | 12 | 10 | 19 | — | 6,101 | 427,310 | 0 | 0 | 667,470 | 5 | 0 |
| " 1871 | 704 | 2,044 | 1,612 | 339 | 133 | 1,198 | 16 | — | 70 | 9 | 49 | 79 | 21 | 42 | 172 | 37 | — | 1 | 14 | 7 | 9 | 11 | 15 | — | 6,582 | 468,686 | 0 | 0 | 697,228 | 9 | 3 |
| " 1872 | 641 | 2,521 | 1,648 | 335 | 201 | 1,410 | 23 | — | 42 | 28 | 56 | 78 | 22 | 43 | 193 | 36 | — | — | 12 | 12 | 12 | 2 | 19 | — | 7,334 | 475,046 | 0 | 0 | 642,048 | 16 | 5 |
| " 1873 | 738 | 3,014 | 1,667 | 357 | 114 | 1,619 | 24 | — | 30 | 6 | 61 | 77 | 21 | 40 | 227 | 16 | — | — | 7 | 5 | 5 | 15 | 26 | — | 8,069 | 788,576 | 0 | 0 | 699,981 | 15 | 2 |
| " 1874 | 764 | 3,384 | 1,977 | 395 | 101 | 1,561 | 22 | — | 36 | 9 | 55 | 90 | 15 | 40 | 172 | 28 | — | — | 2 | 2 | 3 | 14 | 31 | — | 8,701 | 840,890 | 0 | 0 | 1,068,693 | 0 | 8 |
| " 1875 | 830 | 4,270 | 2,352 | 413 | 152 | 1,658 | 25 | — | 31 | 16 | 83 | 103 | 20 | 46 | 248 | 27 | — | — | 5 | — | 3 | 13 | 41 | — | 10,336 | 632,102 | 0 | 0 | 997,775 | 4 | 8 |
| " 1876 | 883 | 5,598 | 2,995 | 467 | 185 | 1,995 | 23 | — | 85 | 17 | 78 | 84 | 29 | 56 | 338 | 49 | — | — | 16 | 3 | 2 | 23 | 38 | — | 12,964 | 899,976 | 0 | 0 | 1,470,440 | 1 | 3 |
| " 1877 | 854 | 6,512 | 3,635 | 532 | 248 | 2,342 | 16 | — | 91 | 28 | 99 | 87 | 23 | 63 | 352 | 38 | — | — | 25 | — | 6 | 26 | 57 | — | 15,034 | 737,410 | 0 | 0 | 1,871,835 | 11 | 0 |
| " 1878 | 647 | 7,155 | 4,325 | 606 | 312 | 2,497 | 19 | — | 84 | 25 | 117 | 95 | 14 | 81 | 347 | 61 | — | — | 16 | 4 | 3 | 23 | 58 | — | 16,489 | 750,540 | 0 | 0 | 2,352,568 | 12 | 11 |
| " 1879 | 633 | 6,669 | 4,558 | 631 | 521 | 2,666 | 14 | — | 101 | 19 | 105 | 90 | 20 | 83 | 471 | 63 | — | — | 15 | 5 | 16 | 31 | 57 | — | 16,768 | 670,138 | 0 | 0 | 2,252,821 | 1 | 3 |
| " 1880 | 579 | 7,143 | 4,972 | 614 | 728 | 3,214 | 16 | — | 76 | 19 | 147 | 98 | 11 | 84 | 422 | 64 | — | — | 22 | 5 | 21 | 42 | 59 | — | 18,336 | 788,346 | 0 | 0 | 2,632,233 | 4 | 4 |
| " 1881 | 585 | 8,596 | 5,759 | 594 | 585 | 4,170 | 17 | — | 72 | 15 | 154 | 120 | 9 | 74 | 485 | 75 | — | — | 8 | 15 | 13 | 35 | 113 | — | 21,494 | 1,055,957 | 0 | 0 | 3,234,094 | 2 | 0 |
| " 1882 | 631 | 9,852 | 5,913 | 711 | 667 | 4,716 | 21 | — | 91 | 20 | 196 | 144 | 15 | 46 | 597 | 74 | — | — | 11 | 14 | 32 | 38 | 101 | — | 23,890 | 1,131,818 | 0 | 0 | 3,793,279 | 0 | 0 |
| " 1883 | 473 | 7,742 | 5,830 | 740 | 661 | 3,728 | 27 | — | 101 | 19 | 173 | 146 | 17 | 27 | 469 | 74 | — | — | 19 | 25 | 23 | 37 | 90 | — | 20,421 | 628,092 | 0 | 0 | 4,105,062 | 2 | 11 |
| " 1884 | 425 | 7,449 | 5,324 | 614 | 758 | 4,147 | 22 | — | 91 | 16 | 147 | 121 | 17 | 93 | 531 | 59 | — | — | 19 | 26 | 20 | 46 | 113 | — | 20,038 | 525,605 | 0 | 0 | 3,253,893 | 5 | 0 |

The number of transactions memorialised under the old system of conveyancing, is 127,650, including conveyances, mortgages, leases, &c.; but, as no record has been kept of the value of the property comprised in these memorials, it is not possible to give the aggregate value of such property.

A Gully near Mount Barker.



## *Chapter XII.—RATES OF WAGES.*

By Mr. W. R. Hunt, Labor Agent.

Decennial returns of averages are particularly useful in a young country like South Australia, as they afford at a glance evidence of national progress and point out periods where the colony, like all young communities, has suffered from depression. Happily during the last two decades depression has been the exception, and although the colony has passed through the prosperity which prevailed from 1879 to 1883 into quieter times, still the vitality of the colony is so strong and elastic that those who know it best are convinced that its steady march towards increased wealth and permanent progress is, with the return of good seasons for the graziers and agriculturists, assured, especially if an improved state of the copper market should also prevail.

Government-assisted immigration is a thing of the past, and the granting of land orders, by which assistance was given to emigrants of a suitable class, is at present suspended, but still those who can afford to pay their passages will do well to give the colony a trial, if they are of a suitable class, young or of middle age, and in robust health, and accustomed to country life. Those who succeed best are single men and women and young married couples, born in and brought up to farm service. The men should be able to handle young horses, hold a plough, drive a wagon and team of four to eight horses, and do other general farm work. As nearly all the ploughing in this colony is done with double and triple ploughs, those who are accustomed to that class of implement will succeed better. The young women should be good domestic servants, able to prepare a good substantial plain dinner, do laundry work, milk cows, make butter, and bake bread: and if five hundred of such desirable young persons were to be landed here now (January, 1886), no difficulty would be experienced in finding them suitable employment. This large demand it must be distinctly understood does not always prevail, although nearly at all times able respectable

young single women in fair numbers, willing to work and to go into the country, experience no difficulty in finding suitable situations at good wages.

The wave of depression now affecting the manufacturing industries in older countries has also seriously affected this colony. Consequently the artisan and mechanic, although they have suffered but a very slight diminution in wage, have had to contend with short time and difficulty in obtaining full employment at their various trades. It is confidently hoped that the carrying out of important public works will improve the condition of those already here, and afford inducement to industrious emigrants to visit these shores.

A class of persons who may count on doing well in South Australia almost at all times is that class known as yeomen and farmers' sons, who have a moderate amount of capital. Such persons arriving here with say from £500 to £1,000, will be able to purchase suitable land for orchard and small dairy purposes. These men when well established in their holdings, and able to raise suitable produce, will find a ready market for their goods at remunerative prices. Such persons by their capital and labor will want to employ others in course of time, and too much stress cannot be laid on the fair field which South Australia offers for their enterprise.

A perusal of the following tables will show that very little variation has occurred in the wages rates—the variations which have taken place being attributable mainly to the fact that, where inferior work has been demanded and paid for accordingly, the average rate generally has been slightly reduced. The tables may be regarded as reliable from the fact that they have been prepared by the writer for the South Australian Government for the past twenty years, and are compiled from the results of an experience of nearly forty years from data carefully recorded in his office.

*Decennial Return showing the Average Rates of Wages in the Province.*

| Occupation. | 1875. | 1876. | 1877. | 1878. | 1879. | 1880. | 1881. | 1882. | 1883. | 1884. |
|---|---|---|---|---|---|---|---|---|---|---|
| Domestic— | £ | £ | £ | £ | £ | £ | £ | £ | £ | £ |
| General servants, male, with board and lodging ..... per annum | 50 | 43 | 43 | 43 | 43 | 45 | 45 | 48 | 48 | 48 |
| Ditto ditto female " " ..... " | 29 | 28 | 28 | 28 | 28 | 28 | 29 | 29 | 29 | 29 |
| | s. d. | s. d. | s. d. | s. d. | s. d. | s. d. | s. d. | s. d. | s. d. | s. d. |
| Cooks, male " " ..... per week | 36 0 | 30 0 | 27 0 | 27 0 | 27 0 | 30 0 | 30 0 | 30 0 | 30 0 | 28 0 |
| Do. female " " ..... " | 17 0 | 16 0 | 16 0 | 16 0 | 16 0 | 16 0 | 17 0 | 17 0 | 17 0 | 17 0 |
| House and kitchen maids " " ..... " | 10 6 | 10 0 | 10 0 | 10 0 | 10 0 | 10 0 | 10 0 | 11 0 | 11 0 | 11 0 |
| Laundresses " " ..... " | 14 0 | 14 0 | 14 0 | 14 0 | 14 0 | 14 0 | 14 0 | 14 0 | 15 0 | 15 0 |
| Farm— | £ s. | £ s. | £ s. | £ s. | £ s. | £ s. | £ s. | £ s. | £ s. | £ s. |
| Man and wife, with board and lodging, both workers.. per annum | 60 0 | 58 0 | 58 0 | 58 0 | 58 0 | 58 0 | 60 0 | 63 0 | 65 0 | 65 0 |
| Single men " " ..... " | 52 0 | 49 0 | 48 0 | 48 0 | 48 0 | 48 0 | 48 0 | 45 0 | 45 0 | 45 0 |
| Harvest hands ..... per week | 1 15 | 1 5 | 1 7½ | 1 7½ | 1 8 | 1 6 | 1 5 | 1 5 | 1 7 | 1 7 |
| Dairy— | s. d. | s. d. | s. d. | s. d. | s. d. | s. d. | s. d. | s. d. | s. d. | s. d. |
| Milkmen, with board and lodging..... per week | 20 0 | 18 0 | 18 0 | 18 6 | 18 6 | 18 6 | 19 0 | 19 0 | 20 0 | 20 0 |
| Dairymaids " " ..... " | 12 0 | 11 0 | 11 0 | 11 0 | 11 0 | 12 0 | 12 0 | 12 0 | 12 0 | 12 0 |
| Dairywork, man and wife, with board and lodging .. " | 30 0 | 27 0 | 27 0 | 27 0 | 27 0 | 27 0 | 28 0 | 29 0 | 30 0 | 30 0 |
| Good cheesemakers " " .. " | 12 0 | 12 0 | 12 0 | 12 0 | 12 0 | 15 0 | 15 0 | 15 0 | 15 0 | 15 0 |
| Hotel— | | | | | | | | | | |
| Barmen " " .. " | 30 0 | 28 0 | 28 0 | 28 0 | 28 0 | 28 0 | 28 0 | 27 0 | 27 0 | 25 0 |
| Barmaids " " .. " | 17 0 | 17 0 | 17 0 | 17 0 | 17 0 | 17 0 | 17 0 | 17 0 | 17 0 | 15 0 |
| Boots and men-servants " " .. " | 20 0 | 18 0 | 18 0 | 18 0 | 18 0 | 18 0 | 18 0 | 18 0 | 17 0 | 17 0 |
| Ostlers " " .. " | 20 0 | 18 0 | 18 0 | 18 0 | 18 0 | 18 0 | 18 0 | 18 0 | 17 0 | 15 0 |
| Stable helps—youths " " .. " | 14 0 | 12 0 | 12 0 | 12 0 | 12 0 | 12 0 | 12 0 | 11 0 | 11 0 | 11 0 |
| Sheep and Cattle Stations— | £ | £ | £ | £ | £ | £ | £ | £ | £ | £ |
| Shepherds, married, with double rations ..... per annum | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Ditto single, and hutkeeper, one ration each .... " | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Ditto single, keeping his own hut, rations ..... " | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 52 | 52 | 52 |

*Decennial Return showing the Average Rates of Wages, &c.*—continued.

| Occupation. | | 1875. | 1876. | 1877. | 1878. | 1879. | 1880. | 1881. | 1882. | 1883. | 1884. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sheep and Cattle Stations—*continued.* | | £ | £ | £ | £ | £ | £ | £ | £ | £ | £ |
| Hutkeepers, with rations | per annum. | 32 | 30 | 30 | 36 | 36 | 36 | 36 | 36 | 36 | 36 |
| Boundary-riders, married, with double rations | " | — | — | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 50 |
| Lamb-minders, required about three months, rations | " | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 40 |
| Man and wife, with two rations | " | 65 | 60 | 60 | 60 | 60 | 65 | 65 | 67 | 67 | 67 |
| Men for general work " | " | 52 | 50 | 50 | 50 | 50 | 50 | 50 | 45 | 45 | 45 |
| Bush carpenters " | " | 90 | 85 | 90 | 90 | 90 | 85 | 85 | 85 | 85 | 85 |
| Men cooks " | " | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 50 |
| Teamstears " | " | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 |
| Sheepdrovers " | " | 75 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 |
| Stockmen " | " | 65 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 |
| Coltbreakers " | " | 70 | 70 | 70 | 70 | 70 | 90 | 90 | 85 | 80 | 80 |
| Water-drawers " | " | 50 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| | | s. d. | s. d. | s. d. | s. d. | s. d. | s. d. | . d. | s. d. | s. d. | s. d. |
| Wellsinkers, Hutbuilders, Woolpressers — Average earnings per week, with rations | | 42 0 | 42 0 | 42 0 | 42 6 | 42 6 | 42 6 | 42 6 | 42 6 | 42 6 | 40 0 |
| | | 40 0 | 40 0 | 40 0 | 40 0 | 40 0 | 35 0 | 35 0 | 35 0 | 35 0 | 30 0 |
| | | 30 0 | 35 0 | 35 0 | 35 0 | 35 0 | 33 0 | 33 0 | 33 0 | 33 0 | 32 0 |
| Sheepshearers, average earnings per 100 | " | 20 0 | 18 6 | 18 6 | 18 6 | 18 6 | 18 6 | 18 6 | 18 6 | 18 6 | 18 6 |
| Trades, &c.— | | | | | | | | | | | |
| Bakers, with board and lodging | per diem | 5 6 | 5 6 | 5 6 | 5 6 | 5 6 | 5 6 | 5 6 | 5 6 | 5 6 | 5 6 |
| Do. without board and lodging | " | — | — | — | — | — | — | — | — | 8 4 | 8 0 |
| Do. small goods men | " | — | — | — | — | — | — | — | — | 10 0 | 10 0 |
| Blacksmiths, without board and lodging | " | 9 0 | 9 0 | 9 0 | 9 0 | 9 0 | 8 6 | 8 6 | 8 6 | 8 6 | 8 0 |
| Bricklayers " " | " | 9 0 | 9 0 | 9 0 | 9 0 | 9 0 | 9 0 | 9 0 | 9 0 | 9 0 | 9 0 |
| Brickmakers " " | per 1,000 on the hack | 12 0 | 12 0 | 12 0 | 12 0 | 12 0 | 12 0 | 12 0 | 12 0 | 11 0 | 10 0 |
| | | £ | £ | £ | £ | £ | £ | £ | £ | £ | £ |
| Bullock-drivers, with rations | per annum | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 50 |
| | | s. d. | s. d. | s. d. | s. d. | s. d. | s. d. | s. d. | s. d. | s. d. | s. d. |
| Bookbinders | per diem | — | — | — | — | — | — | — | 9 0 | 9 0 | 8 6 |
| Butchers, with board and lodging | " | 5 0 | 5 0 | 5 0 | 5 0 | 5 0 | 5 0 | 5 0 | 5 0 | 5 0 | 5 6 |
| Cabinet-makers, without board and lodging | " | 9 6 | 9 6 | 9 6 | 9 6 | 9 6 | 9 6 | 9 6 | 9 0 | 9 0 | 9 0 |

*Decennial Return showing the Average Rates of Wages, &c.*—continued.

| Occupation. | | 1875. | 1876. | 1877. | 1878. | 1879. | 1880. | 1881. | 1882. | 1883. | 1884. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Trades, &c.—*continued.* | | s. d. | s. d. | s. d. | s. d. | s. d. | s. d. | s. d. | s. d. | s. d. | s. d. |
| Carpenters, without board and lodging | per diem | 9 0 | 9 0 | 9 0 | 9 0 | 9 0 | 8 6 | 8 6 | 8 6 | 8 6 | 8 0 |
| Carriage builders " " | " | 9 0 | 9 0 | 9 0 | 9 0 | 9 0 | 9 0 | 9 0 | 9 0 | 9 0 | 8 6 |
| Cigar-makers " " | " | 7 0 | 8 0 | 8 6 | 8 6 | 8 6 | 8 0 | 8 0 | 8 0 | 8 0 | 7 6 |
| Coopers " " | " | 9 0 | 9 6 | 9 6 | 9 6 | 9 6 | 9 0 | 9 0 | 9 0 | 9 0 | 8 5 |
| Collar-makers " " | " | — | 10 0 | 10 0 | 10 0 | 10 0 | 10 0 | 10 0 | 10 0 | 10 0 | 10 0 |
| Day laborers " " | " | 7 6 | 6 6 | 6 6 | 6 6 | 6 6 | 6 6 | 6 6 | 7 0 | 7 0 | 6 6 |
| French polishers " " | " | — | 7 6 | 7 6 | 7 6 | 7 6 | 7 6 | 7 6 | 7 6 | 7 6 | 7 0 |
| Gasfitters " " | " | — | — | — | — | — | — | — | 10 0 | 10 0 | 9 0 |
| Galvanized-iron workers, without board and lodging | " | — | 8 0 | 8 0 | 8 0 | 8 0 | 8 0 | 8 0 | 9 0 | 9 0 | 8 0 |
| Harness-makers " " | " | — | 7 0 | 7 0 | 7 0 | 7 0 | 7 0 | 7 0 | 7 0 | 7 0 | 7 0 |
| Jewellers " " | " | — | 10 0 | 10 0 | 10 0 | 10 0 | 10 0 | 10 0 | 10 0 | 10 0 | 9 0 |
| Machinists " " | " | — | 10 0 | 10 0 | 10 0 | 10 0 | 9 6 | 9 6 | 9 0 | 9 0 | 9 0 |
| Masons " " | " | 9 0 | 9 6 | 9 6 | 9 6 | 9 6 | 9 6 | 9 6 | 9 6 | 9 6 | 9 0 |
| Millers " " | " | 9 0 | 9 6 | 9 6 | 9 6 | 9 6 | 9 0 | 9 0 | 9 0 | 9 0 | 9 0 |
| Miners " " | " | 6 3 | 6 0 | 5 6 | 5 6 | 5 6 | 5 6 | 5 6 | 6 0 | 6 0 | 5 0 |
| Painters and glaziers " " | " | 9 0 | 9 0 | 9 0 | 9 0 | 9 0 | 9 0 | 9 0 | 9 0 | 9 0 | 8 6 |
| Plasterers " " | " | 10 0 | 10 0 | 10 0 | 10 0 | 10 0 | 10 0 | 10 0 | 11 0 | 11 0 | 11 0 |
| Plumbers (48 hours per week) " " | " | — | — | — | — | — | — | — | 11 0 | 11 0 | 10 0 |
| Printers (48½ hours per week) " " | " | — | — | — | — | — | — | — | 9 2 | 9 2 | 9 2 |
| Sawyers " " | per 100ft. | 10 0 | 10 0 | 10 0 | 10 0 | 10 0 | 10 0 | 10 0 | 10 0 | 10 0 | 9 6 |
| Saddlers " " | per diem. | — | 10 0 | 10 0 | 10 0 | 10 0 | 10 0 | 10 0 | 9 6 | 9 6 | 9 0 |
| Shoemakers " " | " | 7 0 | 7 6 | 7 6 | 7 6 | 7 6 | 7 6 | 7 6 | 7 6 | 7 6 | 7 0 |
| Tailors " " | per hour | 0 11 | 1 0 | 1 0 | 1 0 | 1 0 | 1 0 | 1 0 | 1 0 | 1 0 | 0 11 |
| Tanners " " | per diem | 8 6 | 8 6 | 8 6 | 8 6 | 8 6 | 8 6 | 8 6 | 8 6 | 8 6 | 8 0 |
| Tinsmiths " " | " | 7 6 | 8 6 | 8 6 | 8 6 | 8 6 | 8 0 | 8 0 | 8 0 | 8 0 | 7 6 |
| Upholsterers " " | " | — | 10 0 | 10 0 | 10 0 | 10 0 | 10 0 | 10 0 | 10 0 | 9 6 | 9 0 |
| Wheelwrights " " | " | 9 0 | 9 0 | 9 0 | 9 0 | 9 0 | 8 6 | 8 6 | 8 6 | 8 6 | 9 0 |

Scale of rations per week—10lbs. flour, 12lbs. meat, 2lbs. sugar, ¼lb. tea, for each adult. Married farm laborers have cottage provided rent free, and fuel and water gratis. Servants are conveyed up country at employers' cost.

W. R. HUNT, Labor Agent.

## *Chapter XIII.—THE FISHES OF SOUTH AUSTRALIA AS A FOOD PRODUCT.*

By Professor E. H. Rennie, M.A., D.Sc.

In a valuable paper "On the place of fish in a hard-working diet," contained in one of the handbooks published in connection with the recent Fisheries Exhibition in London, attention has been drawn to the value of fish as an article of food. As no examination has been made from this point of view of the fish found in Australian waters, the members of the South Australian Commission appointed in connection with the Colonial and Indian Exhibition in London have thought it desirable that analyses should be made of the fish most commonly found in the Adelaide market, in order to compare them with the fish of European waters, and also to ascertain whether any marked difference can be detected in the condition of the fish at two different seasons of the year.

Before giving the results of these analyses, it may be desirable to enumerate the main constituents of food. These may be divided into three principal classes:—

(*a*). Nitrogen compounds.
(*b*). Carbon compounds (fats, oils, starches, &c.)
(*c*). Mineral compounds or ash constituents.

Of these the most important in animal food, under ordinary conditions, are the nitrogen compounds. It has been shown that they are the "tissue formers," and where severe muscular work is required (and where consequently there is great waste of tissue), increase of nitrogen compounds in the food is necessary. This condition is indeed practically recognised by artizans and all those whose occupation or profession requires severe physical exertion. The carbon compounds serve chiefly to supply material for maintaining the animal heat—in fact, they act very much in the same way as the fuel in a steam-engine.

In the analyses which follow, the amounts of water, nitrogen compounds, carbon compounds, and ash, have been determined. It

was intended that there should be two complete sets of analyses—one of fish taken towards the end of winter, and the other of fish taken about mid-summer; but it was found impossible to obtain duplicates of a few of the fish of the first set before the time at which this paper was required for the printer, and others—for example the Murray cod and the oyster—could not be obtained in August. The popular names by which the fish are known in Adelaide are given, and as far as possible the scientific names, but these latter could not be all obtained. The numbers in the various columns represent percentages. That the totals are never exactly one hundred is due, as in all similar cases, to unavoidable experimental error.

| Popular Name. | Scientific Name. | Date at which obtained. | Water. | Ash. | Carbon Compounds (Fat). | Nitrogen Compounds. |
|---|---|---|---|---|---|---|
| Snook | Sphyroena noval Hollandiae | Aug. 18 | 72·88 | 1·70 | 3·02 | 22·75 |
| | | Dec. 19 | 79·63 | — | 0·27 | 18·30 |
| Dark Whiting | Isosillago maculata | Aug. 18 | 76·36 | 1·30 | 1·79 | 21·00 |
| | | Dec. 22 | 76·38 | 1·56 | 0·91 | 21·64 |
| Mullet (common) | ? | Aug. 18 | 77·90 | 1·34 | 0·96 | 20·56 |
| | | Dec. 22 | 77·26 | 1·62 | 0·98 | 21·00 |
| Flathead | Platycephalus ? | Aug. 20 | 76·06 | 1·39 | 0·97 | 22·31 |
| | | Dec. 22 | 76·62 | 1·48 | 0·37 | 22·15 |
| Tommy Rough | Arripis Georgianus | Aug. 20 | 73·90 | 1·40 | 2·75 | 23·00 |
| | | Dec. 22 | 75·56 | 1·64 | 1·23 | 21·65 |
| Schnapper | Pagrus unicolor | Aug. 25 | 77·84 | 1·49 | 1·28 | 19·51 |
| | | Dec. 22 | 81·31 | 0·94 | 0·68 | 17·56 |
| Garfish | Hemirhamphus intermedius | Aug. 25 | 77·48 | 1·38 | 0·39 | 20·83 |
| | | Dec. 19 | 76·45 | — | 0·47 | 21·43 |
| Butterfish | Sciaena antacica | Sept. 16 | 76·22 | 1·16 | 3·03 | 19·42 |
| | | Dec. 18 | 76·23 | 1·20 | 4·00 | 19·18 |
| Flounder | Rhombosola tapirana (?) | Aug. 18 | 80·16 | 1·54 | 1·04 | 17·50 |
| Salmon | Arripis truttaceus | Aug. 20 | 77·24 | 1·48 | 0·73 | 21·00 |
| Salmon Trout | ? | Aug. 20 | 74·99 | 1·43 | 2·88 | 20·83 |
| Sole | ? | Aug. 20 | 77·75 | 1·35 | 0·46 | 20·94 |
| Crayfish | ? | Sept. 16 | 70·68 | 2·30 | 1·64 | 25·20 |
| Murray Cod | Oligorus Macquariensis | Dec. 18 | 80·36 | 1·32 | 0·33 | 18·74 |
| Silver Whiting | Sillago punctata | Dec. 22 | 77·87 | 1·50 | 0·33 | 20·68 |
| Oyster | ? | Dec. 29 | 88·09 | 2·52 | 1·21 | 8·80 |

If these analyses be compared with those hitherto published of European species, it will be found that the South Australian fish are in no respect inferior; on the contrary, the nitrogen compounds

are in nearly all cases higher. This will be seen from the following numbers extracted from the paper already referred to:—

| Name. | Nitrogen Compounds. | Carbon Compounds (Fat). |
|---|---|---|
| Salmon | 13·09 | 4·85 |
| Whiting | 15·09 | 0·38 |
| Mackerel | 23·42 | 6·76 |
| Sole | 11·94 | 0·25 |
| Oyster | 4·95 | 0·37 |

Referring again to the former table of analyses it will be noticed that, while in the cases of the dark whiting, the mullet, and the flathead, the analyses of fish taken at different seasons agree fairly well, there is a marked difference in the cases of the snook and the schnapper, and again a smaller difference in the remaining instances. These discrepancies are of course easily accounted for by the peculiarities of individual fish. So far as these results go, no conclusions can be drawn as to the influence of the season upon the fish, nor, perhaps, would it be possible safely to do so, unless a very large number of analyses of each species were made and an average taken. The specimens analysed were in all cases fairly representative. The numbers serve to show clearly, however, that, as before remarked, the South Australian fish are certainly not inferior to the European, regarded simply as a food material (the mackerel perhaps excepted, a fish seldom eaten in these colonies), and they also indicate that the popular opinion in favor of the "snook" and "tommy rough" is well grounded, both of these fish containing relatively high percentages both of fat and of nitrogen compounds. The butterfish is rich in fat, but does not contain so high a percentage of nitrogen compounds as many of the others. So far as a single analysis can be taken as evidence, the Murray cod ranks lower than many of the others.

The analysis of the oyster was made from an average of a dozen of the large South Australian oysters, just as they were taken from the shell, and shows how large a proportion of the animal as ordinarily eaten is simply water, and, consequently, how small a proportion of nitrogen compounds it contains. It does not neces-

sarily follow, however, that the popular notion as to the nutritious character of the oyster is a fallacy, because it is quite possible, and even probable, that, as it is usually eaten, *i.e.*, uncooked, a much larger proportion of its solid constituents may be digested and assimilated than is the case with other fish. In fact, it may be pointed out, in conclusion, that chemical analysis, though giving us much information as to the value of a food material, does not tell us everything. The nitrogen compounds, for example, though possessing all approximately the same composition, are by no means all identical, and *may* vary considerably in different fishes, and may, therefore, not be all equally capable of digestion and assimilation. In the crayfish, for example, the percentage of nitrogen compounds is higher than in any of the others; but it is certainly not usually considered a very nutritious food. Then, again, the value as food material depends very much upon the methods of cooking; but to go into these matters in detail would need more space than can be here allotted to the subject.

## *Chapter XIV.—THE NORTHERN TERRITORY.*

As previously stated, in the year 1863 the northern boundary of South Australia was shifted to the northern coast of Australia, so that the province now extends from the southern to the northern seaboard. The additional country thus acquired is termed "The Northern Territory of South Australia," and includes country adapted to the cultivation of tropical products—sugarcane, indigo, cotton, tapioca, rice, coffee, &c. These lands are open for selection, and the fee-simple can be acquired for twelve shillings and sixpence per acre any time during ten years, the selector having to pay sixpence per acre per annum rental until the purchase is effected. The interior and less valuable country is also well suited to pastoral settlement, and several large squatters have already taken up land there and stocked it, with satisfactory results. This land can be taken up on twenty-one years' lease, at two shillings and sixpence per square mile upset price.

On December 31st, 1885, the stock in the Territory was stated to be—Horned cattle, 136,000; horses, 6,000; sheep, 40,000; and in the Resident's latest report he says:—"It is very evident "from the activity which is being displayed by the pastoral "lessees that large arrears of the accessible waste lands of the "Northern Territory are regarded as eminently suitable for cattle "and sheep, and worth the expenditure of large sums of money in "stocking and developing."

The Northern Territory is also rich in mineral wealth—specially in gold and tin—the development of which will be much assisted by the railway which has been authorised from Palmerston, the capital of the settlement, to Pine Creek in the gold district.

The following memo., kindly supplied by Mr. James Bath (secretary to the Hon. the Minister of Education), gives the export of gold from the Northern Territory during the last five

years. This will show how large a factor gold is in the national wealth of that portion of the province :—

*Amount of Gold exported from the Northern Territory.*

| | |
|---|---|
| From June, 1881, to June, 1882 ..... | 25,135ozs. |
| From June, 1882, to October, 1882 ..... | 4,514ozs. |
| From October, 1882, to December, 1882 .... | 7,328ozs. |
| From January, 1883, to June, 1883 ..... | 12,398ozs. |
| From June, 1883, to October, 1883 ..... | 4,354ozs. |
| From October, 1883, to December, 1883 .... | 4,204ozs. |
| From January, 1884, to March, 1884 ..... | 4,658ozs. |
| From March, 1884, to June, 1884..... | 8,225ozs. |
| From June, 1884, to October, 1884 ..... | 5,171ozs. |
| From October, 1884, to December, 1884 .... | 3,621ozs. |
| From January, 1885, to March, 1885 ... .. | 5,797ozs. |
| From March, 1885, to June, 1885 ..... | 4,315ozs. |
| Total..... | 89,720ozs. |

representing a value, at an average rate of £3 15s. per ounce, of £343,950.

The following extract is taken from the *N. T. Times Almanac and Directory* with reference to recent valuable argentiferous discoveries, viz.:—"The recent discovery of immense lodes of silver-"bearing ores in the neighborhood of the Mary River, about "thirty miles from Pine Creek, is likely to prove most important. "Several samples from the lodes—which are large and extend "over a considerable acreage—have been sent to Sydney for "assay, and yielded from 50ozs. to 300ozs. of silver to the ton, "and a large percentage of lead. Other discoveries of silver-"bearing lodes have also been reported, and the quality of the "ore is favorably spoken of by experts."

A jetty is now being erected at Port Darwin, and tenders are being invited for the construction of a railway from Palmerston to Pine Creek.

The affairs of the Territory are administered by a Government Resident, who acts under the direction of the Hon. the Minister of Education in Adelaide. Palmerston is the point at which the cables connecting Australia with the telegraphic systems of Europe, Asia, and America touch Australia. The land line connecting the cables with the Australasian telegraphs was

constructed by South Australia in 1872, through its own territory from Palmerston to Adelaide—a distance of 1,973 miles—an enterprise which cost the colony nearly half a million of money.

The present Government Resident is the Hon. J. L. Parsons, formerly Minister of Education in Adelaide. Mr. Parsons has for years past been very much impressed with the resources of the Northern Territory, which only await enterprising development. A few years ago he visited the Territory personally, and on his return suggested the carrying out of certain public works, and the adoption of a more vigorous policy of pastoral, mineral, agricultural, and commercial development. Some of these proposals were embodied in legislation, and are now the law of the land. There are some fine rivers in the Northern Territory, which will greatly assist the opening up of the distant country, and, when a more extensive settlement takes place, will doubtless be much valued for irrigation purposes.

## *Chapter XV.—STATISTICS.*

The following information is gleaned from the Statistical Register for 1884, the latest official record:—

### POPULATION.

The increase of population during the year was, by births 7,058, by immigration 1,208, making the total number on the 31st of December of 312,781 persons, composed of 164,877 males and 147,904 females. In 1875 the population was 210,442, and in 1880 it was 267,573. During the year 1884, 356 foreigners obtained letters of naturalisation, and thereby became British subjects; of these 44 were Russians, 136 Germans, 114 Chinese, and the others made up of various nationalities. The proportion of births per thousand of the population was 37·69, the proportion of marriages 9·40 per thousand, and the proportion of deaths 15·24 per thousand.

### PRODUCTION.

The area of land alienated from the Crown in 1884 was 10,767,605 acres. In 1875 it was a little over 6,000,000 acres. The area under cultivation was, in 1875, 1,444,586 acres; in 1884, 2,785,490 acres. The area of land enclosed in 1875, 20,286,007 acres; in 1884, 53,444,411 acres. The production of wheat, the principal crop, was, in 1875, 10,739,834 bushels; in 1884, 14,621,755 bushels. In 1884 there were in the colony—horses, 162,420; horned cattle, 389,726; sheep, 6,696,406; goats, 8,159; pigs, 163,807; poultry, 927,909. The shipment of wool amounted in 1875 to the value of £2,066,227; in 1884 to £2,618,626. The shipment of minerals amounted in 1875 to £762,386; in 1884 to £491,950. The production of wine in 1884 was 473,535 gallons.

### IMPORTS AND EXPORTS.

The value of imports amounted in 1875 to £4,203,802; in 1884 to £5,749,353. The value of exports amounted in 1875 to £4,805,050; in 1884 to £6,623,704. The proportion of imports

from the United Kingdom in 1884 was £2,983,296, the balance being from other places. The combined import and export trade of the colony was, in 1875, £9,008,851; in 1884, £12,373,057.

## SHIPPING.

The arrivals of shipping were, in 1884—British, 768,301 tons; foreign, 141,034 tons; total, 909,335 tons. The number of vessels belonging to Port Adelaide were, in 1875, steamers, 75, tonnage, 7,443; sailing vessels, 212, tonnage, 24,948. In 1884, steamers, 88; tonnage, 10,665; sailing vessels, 220; tonnage, 27,931.

## REVENUE AND EXPENDITURE.

In 1875 the general revenue of the colony amounted to £1,143,312, in 1880 it was £2,027,963, and in 1884 it amounted to £2,024,928. The expenditure in 1884 upon public works was £2,163,149, a large proportion of which was provided from loan funds. The amounts expended by Corporations and District Councils was £114,537. The receipts from Government railways were, during 1884, £424,416.

## RELIGION.

The number of churches or chapels existing in 1884 was 928; the number of sittings provided, 200,123; the number of Sunday schools was 727; teachers, 6,729; scholars, 57,311.

## EDUCATION.

The number of public schools in 1884 was 227; scholars, 42,758; persons employed in teaching, 1,000. Cost of department, exclusive of expenditure on buildings, £76,879. In addition to these there are 287 private schools with 11,296 scholars. There are over 112 country institutes, which have libraries attached to them containing an aggregate of 98,688 volumes.

## POSTAL.

The number of letters posted in 1884 was 12,051,482; of packets, 627,600; of newspapers, 6,890,810. The money orders issued and paid amounted to £129,355.

## RAILWAYS AND ROADS.

In the year 1884 there were 1,035 miles of railway open for traffic. The total number of passengers conveyed since they have been open is 34,194,692.

## BANKS.

There were nine banks in 1884, and since then a tenth has begun business. The average of coin and bullion was £1,112,250; the liabilities, £5,553,159; the assets, £11,546,828; the notes in circulation, £548,021; the value of bank premises, £376,812.

## *Chapter XVI.—CONCLUSION.*

In the preceding pages the writer's endeavor has been to show what has been accomplished in the Colony of South Australia during the first half century of its history, and to indicate what are the resources of this distant dependency of the British Empire. The last two or three years have witnessed a serious financial and commercial depression, a depression which, unfortunately, has not yet passed away. The colony, however, has experienced bad times before, but the buoyancy of its resources and the hopefulness of its people have overcome the pressure of adverse circumstances; and the position of the colony to-day is a testimony to the largeness of its resources and the energy of its citizens. In the brief space of fifty years a mere handful of the Anglo-Saxon race have, by industry, enterprise, and thrift, laid the foundations of a young nation, have subjugated the land to the service of man, have built cities and towns, extended settlement over millions of acres of land, erected imposing public buildings, constructed a network of railways and telegraphs and telephones, built reservoirs and gasworks, and extensive distributing systems of water and gas, reared warehouses, wharves, and jetties, and secured all the conveniences and even elegancies of modern civilised life. These are results which may be accepted as the promise of the future. With the acquired wealth of the past and the valuable experience which has been gained—with confidence in the productiveness of the soil, and with wise legislation to ensure the employment of the land for its best purposes, the future is full of promise. Certainly, in times of ordinary prosperity, South Australia offers an attractive field for the artisans and laborers who are being crowded out of the overgrown cities of the United Kingdom, and are compelled to seek "fresh woods and pastures new." Men and women who come here determined to resolutely and cheerfully adapt themselves to the new circumstances of life to which they are introduced—men and women who are sober, industrious, hopeful, will as a rule find the opportunity of attaining to positions as

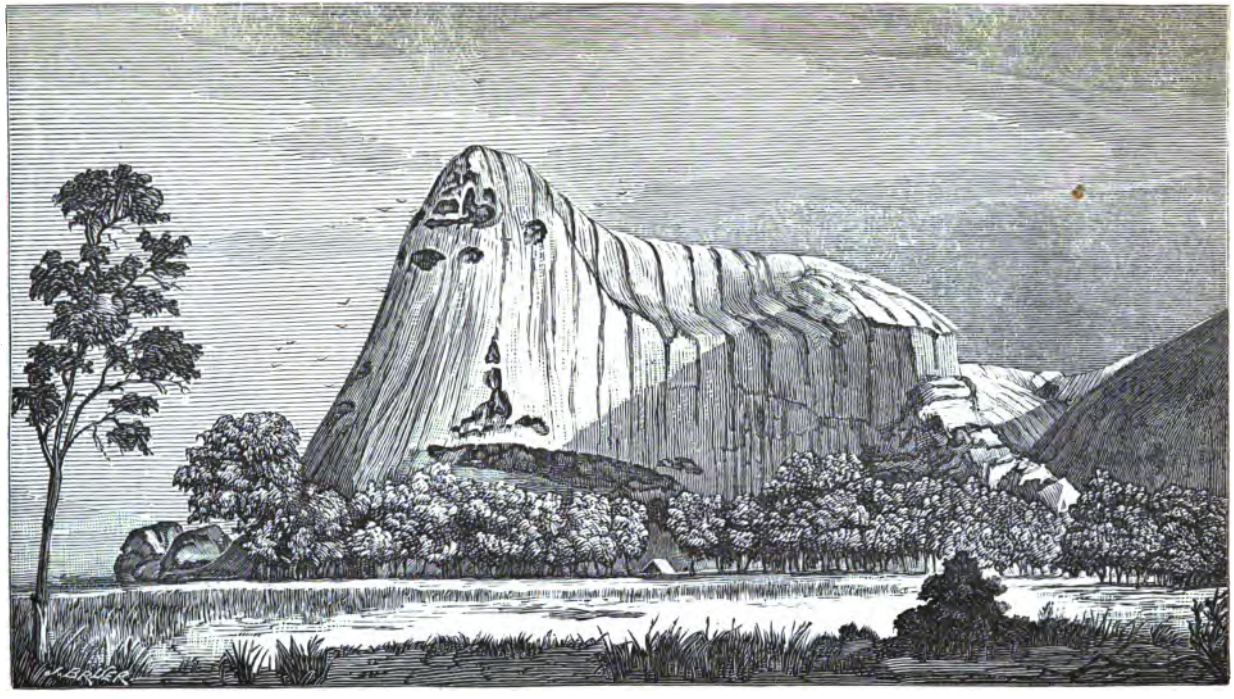
landowners, which they seldom or never could reach in the father-land. Emigrants must not expect to pick up gold in the streets, or imagine that to them there will be any royal road to fortune. Fortune will be won only by manful effort, honest labor, prudent foresight, and strict temperance, as many a man now in the front ranks of society is able to testify. Small capitalists will find the colony a suitable field for the investment of their capital in land and property, or in other ways, so as to secure them excellent returns. To all, however, who contemplate shifting from the crowded populations of British cities and towns to the freer and wider fields of Britain's colonies, the words recently spoken by Lord Carrington, the new Governor of New South Wales, may be commended to their careful consideration. His Lordship, when addressing a number of emigrants who had arrived at Sydney, said:—"You have come to a happy country. You have left the "old country behind you, where, as many of us know here, there "are many and great difficulties for honest men to get work. Every "honest, industrious man is able not only to gain work, but also "able to obtain a fair day's wage for a fair day's labor. But it is "my duty to inform you that wages must be worked hard for. "Any man will be grievously disappointed who thinks he has come "over to this colony and will be able to spend a life of idleness and "be paid for it. The great thing to avoid is giving way to drink. "And I can tell you that in this country no honest, upright, "honorable man, who keeps himself respectable, need in any way "fear getting a good day's work and a good day's wage for it. At "the same time you must not pick and choose. You must go "steadily at work—take that which comes, and earn an honest "living; and as time goes on you may be perfectly certain that "you will be able to improve your position." These words, though spoken in Sydney to emigrants who were about to settle in New South Wales, are equally applicable to all persons who may purpose to come to the Australian colonies, and they are quoted here as containing most judicious advice given by one whose position in the adjoining colony as Her Majesty's representative, and whose high social standing in England, entitle his words to the respectful and earnest attention of all thoughtful persons.

# APPENDIX.

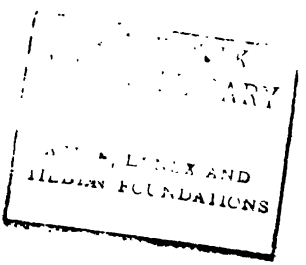
STATEMENT SHOWING AREA OF COLONY, ALSO AREA ALIENATED AND AREA LEASED.

| | South Australia Proper (in acres). | | | Northern Territory (in acres). | | | (in a[illegible]es). | | |
|---|---|---|---|---|---|---|---|---|---|
| 1. Total area of Colony ..... | — | — | 243,244,800 | — | — | 335,116,800 | — | — | 578,361,600 |
| 2. Total area alienated— | | | | | | | | | |
| (a) In fee simple ..... | — | 6,716,154 | — | — | 464,850 | — | — | 7,176,004 | |
| (b) Held on credit ..... | — | 3,041,639 | — | — | 32,424 | — | — | 3,074,063 | |
| (c) By endowments—University lands ..... | 50,004 | — | — | — | — | — | 50,004 | | |
| Education lands .. | 301,377 | — | — | — | — | — | 301,377 | | |
| | | 351,381 | | | | 497,274 | | 351,381 | |
| | | | 10,109,174 | | | | | | 10,606,448 |
| 3. Total area leased— | | | | | | | | | |
| (a) Pastoral lands—Leases | 135,721,600 | — | | 128,867,200 | — | — | 264,588,800 | | |
| Claims ..... | 1,925,120 | — | — | 57,687,040 | — | — | 59,612,160 | | |
| | | 137,646,720 | | | 186,554,240 | | | 324,200,960 | |
| (b) Mineral lands—Leases | 15,588 | — | — | | | | | | |
| Claims ..... | 70,326 | — | — | 17,099 | — | — | 103,643 | | |
| Gold leases..... | 630 | — | — | | | | | | |
| | | 86,544 | | | 17,099 | | | 103,643 | |
| (c) Other leases— | | | | | | | | | |
| Scrub ) With right | 952,220 | | | | | | | | |
| 10 year ) of purchase | 48,949 | | | | | | | | |
| Selectors..... | 697,922 | | | | | | | | |
| Within S.E. Schedule | 54,561 | | | | | | | | |
| Miscellaneous ..... | 1,890,630 | | | | | | | | |
| Aboriginal ..... | 99,653 | | | | | | | | |
| | | 3,743,935 | | | | | | 3,743,935 | |
| | | | 141,477,199 | | | 186,571,339 | | | 328,048,538 |

G. W. GOYDER, Surveyor-General.



Ayers Rock, Central Australia.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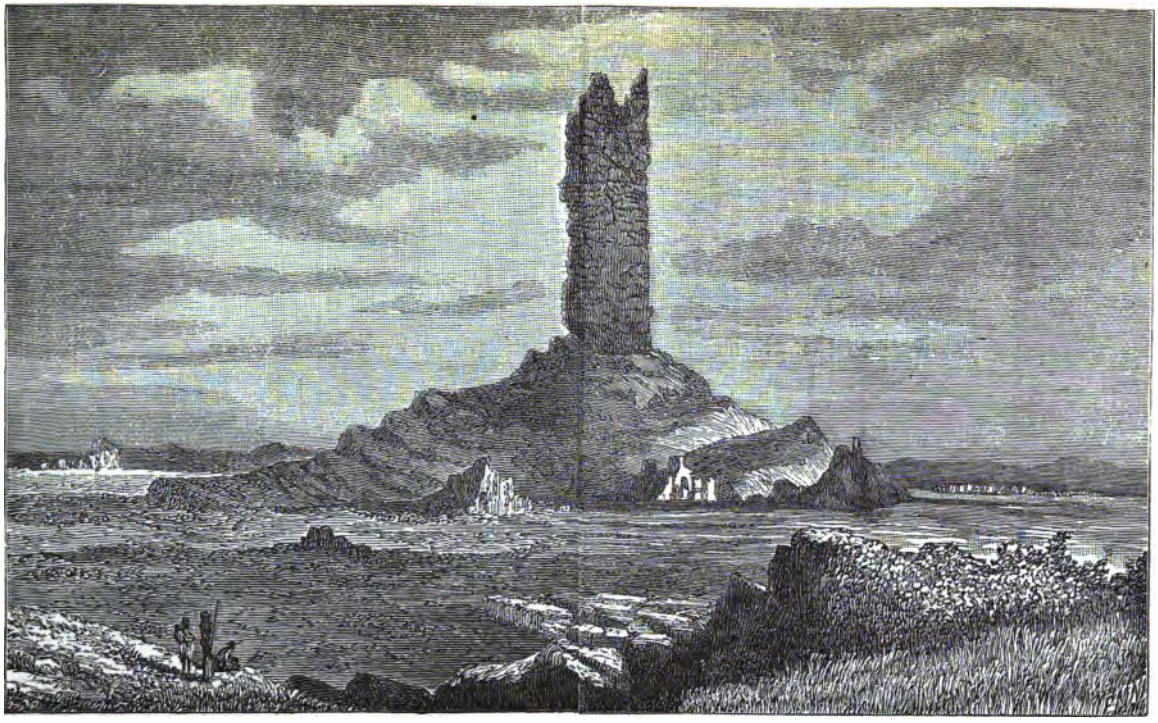
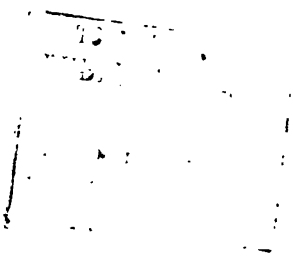
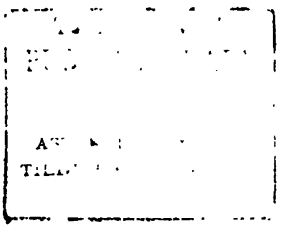


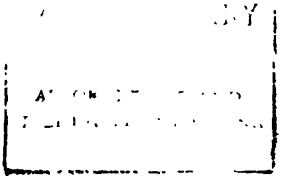
Chambers Pillar, Central Australia.



"Wewat-thelari," a Man of the Narrinyeri Tribe.



**"Waldaninyeri," a Woman of the Yarildethungar Clan of the Narrinyeri.**



**Hunting Scene.**

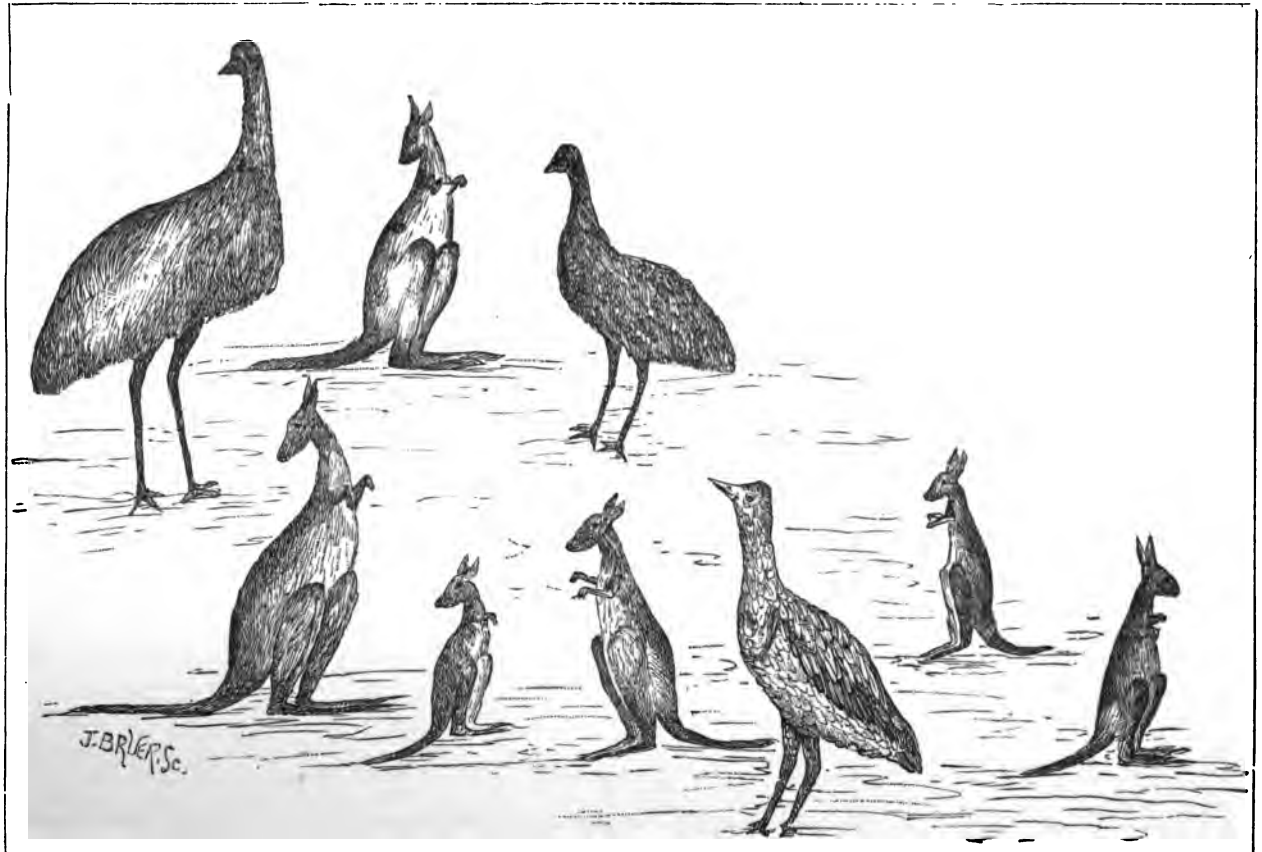
*Drawn by "Yertrabrida Solomon," an Aboriginal of the Coorong, in* 1876.

**Hunting Party.**

*Drawn by "Yertrabrida Solomon," an Aboriginal of the Coorong, in* 1876.

War Dance.

*A Drawing by an Aboriginal of the Kingston Tribe.*




## Group of Animals.

*Drawing by "Yertrabrida Solomon," an Aboriginal of the Coorong, in* 1876.

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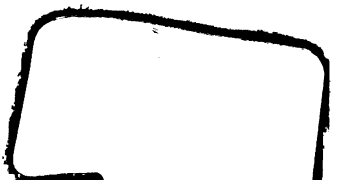
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